

**SOUTH COAST AIR QUALITY MANAGEMENT
DISTRICT RULE 1150.1**

**FOURTH QUARTER 2005 MONITORING REPORT
BRADLEY LANDFILL AND RECYCLING CENTER
SUN VALLEY, CALIFORNIA**

Prepared for

Waste Management of California, Inc.

Bradley Landfill and Recycling Center

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Abbreviations

CARB	California Air Resources Board
FID	Flame Ionization Detector
GEM-500	CES-LANDTEC Gas Extraction Monitor
LFG	Landfill Gas
OVA	Organic Vapor Analyzer
PPB	Parts per Billion
PPM	Parts per Million
SCAQMD	South Coast Air Quality Management District
TGNMO	Total Gaseous Non-methane Organic Compounds
TOC	Total Organic Compounds

1 EXECUTIVE SUMMARY

This fourth quarter report for the year 2005 summarizes the monitoring and sampling results at the Bradley Landfill and Recycling Center (BLRC) for compliance with South Coast Air Quality Management District (SCAQMD) Rule 1150.1(f)(2)(B) and pursuant to the conditions set forth in the Alternative Rule 1150.1 Compliance Plan (SCAQMD A/N 394147) approved by SCAQMD on June 19, 2002. The Compliance Plan is found in Appendix A.

1.1 Site Description and Background

The Bradley Landfill and Recycling Center (BLRC) is located in the Sun Valley District of Los Angeles, California, in the northwest portion of the Los Angeles metropolitan area. The landfill is owned and operated by Waste Management Recycling and Disposal Services of California, Inc. (WMRDSC, formerly Valley Reclamation Company). The site was previously utilized as a sand and gravel pit by Conrock Company. Waste Management of Los Angeles Hauling Company also operates on the BLRC property. The landfill is a Class III waste disposal facility occupying approximately 209 acres. A site map containing the current landfill boundary and locations of landfill gas (LFG) extraction wells is presented as Figure 1.

An active LFG migration/emissions control system has been in operation at the site since 1982. During normal operation, the higher BTU value LFG is processed through the gas treatment plant and delivered to one (1) on-site and one (1) offsite LFG-to-energy facility. Stewart and Stevenson (S&S) currently operates the on-site facility under contract by Waste Management, Inc. The off-site facility is owned by Penrose Landfill Gas Conversion, LLC. The on-site facility operated by S&S was placed into service on March 3, 2003. The lower BTU value gas (under 500 BTU/cf) collected from the Bradley east and the Bradley west perimeter is disposed of through the BLRC flare stations. When the higher BTU value LFG is not in demand by either of the LFG-to-energy facilities, the gas is routed to one of the on-site flare stations where it is combusted in accordance with SCAQMD rules and permit conditions.

1.2 Gas Collection and Control System

The BLRC LFG collection and control system (GCCS) consists of three (3) LFG flares, one LFG compressor, vertical extraction wells, header and subheader piping, and a condensate injection system. The LFG collection series consist of header collection pipes, laterals, vertical extraction wells and horizontal collectors. Presently, the system has 123 vertical dual completion wells and 77 single completion vertical wells for a total of 200 wells. In addition, the system has 7 horizontal collectors.

Condensate currently drains by gravity to 15 collection sumps where it is pumped to the LFG treatment plant for processing. Condensate processing consists of hydrocarbon separation, condensate injection into the flares, and pH adjustment for discharge to the City of Los Angeles sanitary sewer system. As the hydrocarbon phase is accumulated, it is transferred to the larger hydrocarbon storage tank where it accumulates until transported off-site in accordance with all applicable regulations.

1.3 Monitoring and Sampling Activities Summary

Field activities performed by Shaw Environmental, Inc. (Shaw) during this quarter included:

- Monthly subsurface perimeter probe monitoring (as required by the Local Enforcement Agency)
- Quarterly integrated surface emission monitoring and sampling for laboratory analysis
- Quarterly instantaneous surface emission monitoring
- Quarterly flare inlet LFG sampling for laboratory analysis
- Quarterly ambient air monitoring (24-hour)
- SCAQMD Rule 431.1 Sulfur Monitoring

AtmAA, Inc. performed the laboratory analysis for two (2) integrated surface emission samples, a gas compressor LFG sample, flare inlet LFG samples, ambient air sample(s), and monthly perimeter probe samples from the probes with the highest field-obtained TOC as methane concentration. The integrated surface samples were analyzed for toxic air contaminants (Toxic Air Contaminants--Core Group, Guidelines for Implementation of Rule 1150.1, Table 1), methane, and total gaseous non-methane organic compounds (TGNMOs) as stipulated by SCAQMD's Rule 1150.1. The flare inlet LFG samples were analyzed for the concentration of fixed gases, hydrogen sulfide, and toxic air

contaminants. The ambient air samples were analyzed for toxic air contaminants, methane, and total gaseous non-methane organic compounds (TGNMOs). Toxic air contaminants were analyzed by gas chromatograph/mass spectrometry consistent with Environmental Protection Agency (EPA) Method TO-15. Fixed gases were analyzed by gas chromatograph/thermal conductivity detector using EPA Method 3C Modified. Total gaseous non-methane organics (TGNMOs) were analyzed using modified EPA Method 25C with gas chromatograph/flame ionization detection/total combustion analysis. A gas chromatograph/sulfur chemiluminescence detector was used to analyze for hydrogen sulfide per SCAQMD Rule 431.1 and the Rule 431.1 Alternative Monitoring Plan (A/N 267044), and analyzed using SCAQMD Method 307-91.

1.3.1 Subsurface Perimeter Probe Monitoring §1150.1(e)(1)

Monthly subsurface perimeter probe monitoring was performed using a Landtec GEM-2000 LFG monitor during the quarter. Perimeter probes were monitored for percent methane by volume in air.

Alternative monitoring procedures are used in the area of perimeter probe E-8D, including monitoring of the probe and performing surface emission monitoring of Grid 31-D, as specified in the Rule 1150.1 Compliance Plan for Bradley Landfill. These alternative monitoring procedures are implemented when TOC as methane concentrations meet or exceed five (5) percent by volume, measured as methane. Field and laboratory data from subsurface perimeter probe monitoring and laboratory TOC concentrations as methane are discussed in Section 2.2 and presented in Appendix B. Samples from the probes with the highest field-obtained TOC as methane concentrations are sent to AtmAA Inc. for laboratory analysis.

1.3.2 Integrated Surface Emission Monitoring §1150.1(e)(2)

The TOC as methane concentration collected from each grid is listed in Table 3-1, Integrated Surface Sampling Field Summary. Field data sheets are presented in Appendix C. All of the integrated TOC as methane readings were within compliance limits, as set forth by SCAQMD Rule 1150.1. Typically, the two samples having the highest field TOC as methane concentrations are sent to the laboratory for further analysis. The TOC as methane background reading was 5.0 ppm. During surface emissions monitoring, TOC as methane concentrations above background were no more than 15 ppm. Samples from Grids 3 and 111 were selected for laboratory analysis.

RES Environmental obtained samples from Grids 3 and 111 and submitted them for laboratory analysis for methane, TGNMOs, and Toxic Air Contaminants.

Laboratory analysis of the samples collected from Grid 3 detected low-level concentrations (less than 5 parts per billion [ppb]) of the following constituents: benzene, dichloromethane, carbon tetrachloride, toluene, and xylenes. Laboratory analysis of the samples collected from Grid 3 detected concentrations of methane at 9.54 parts per million [ppm]. Laboratory analysis of the samples collected from Grid 3 detected low-level concentrations (less than 5 ppm) of TGNMO.

Laboratory analysis of the samples collected from Grid 111 detected low-level concentrations (less than 5 ppb) of the following constituents: benzene, carbon tetrachloride, toluene, and xylenes. Laboratory analysis of the samples collected from Grid 111 detected concentrations of methane at 74.4 ppm. Laboratory analysis of the samples collected from Grid 111 detected low-level concentrations of TGNMO (less 5 ppm) of methane. The laboratory reports are presented in Appendix C.

1.3.3 Instantaneous Surface Emission Monitoring §1150.1(e)(3)

Instantaneous surface emission monitoring was conducted on October 10, November 16, and December 20, 2005, and consisted of monitoring the landfill surface for the presence of LFG emissions. Total organic compound (TOC) measurements (measured in ppm as methane) were recorded in accordance with procedures described in the SCAQMD Guidelines for Implementation of Rule 1150.1. Areas of the landfill where TOC as methane concentrations were greater than 500 ppm TOC as methane were remonitored within 10 calendar days of the original detection. Instantaneous surface emission monitoring field data are presented in Appendix D.

On October 10, 2005 instantaneous monitoring of Grids 2, 4, 5, 93, and 112 had detected concentrations ranging from 5,000 to 10,000 ppm TOC as methane. These grids were repaired on October 10, 2005 and 10-day remonitoring occurred on October 20, 2005. The remonitored concentrations for all of these grids measured less than 500 ppm TOC as methane.

On November 16, 2005, instantaneous monitoring of Grids 2, 4, 5, 6, 33, 75, 76, 84, 88, 89, 93, 96, 107, 118, 124, and 127 had detected concentrations over 500 ppm TOC as methane. Concentrations ranged from 3,000 to 100,000 ppm. These grids were repaired on November 16, 2005 and 10-day remonitoring was performed on November 17 and 25, 2005. Remonitored concentrations for all grids except Grids 2 and 4 all measured below 500 ppm. Grids 2 and 4 were repaired and a 2nd 10-day remonitoring was performed on December 6, 2005. Remonitoring results in Grids 2 and 4 ranged from 20 to 100 ppm.

In December 2005, instantaneous monitoring of Grids 2, 4, 5, 89, 105, 107 and 111 detected concentrations of ranging from 1,000 to 5,000 ppm TOC as methane. Each of these grids was repaired on December 20, 2005 and 10-day remonitoring was performed

on December 29, 2005. Remonitored concentrations for all grids measured below 500 ppm.

Additional discussion pertaining to the grids is discussed in Section 4.2.

1.3.4 Landfill Gas Chemical Analysis §1150.1(e)(4)

LFG samples were collected from each of the three LFG flaring systems on November 23, 2005 and were analyzed for fixed gases, TGNMOs, toxic air contaminants, and hydrogen sulfide. Results are discussed in Section 5.2 and provided in Appendix E.

1.3.5 Ambient Air Monitoring (24-hour) §1150.1(e)(5)

Four ambient air samplers were used to collect upwind (south) and downwind (north) samples on November 6 and 7, 2005. Two ambient air samplers were positioned upwind at the landfill property boundary and two downwind at the landfill property boundary (Figure 1). Low concentrations of benzene, carbon tetrachloride, toluene, xylenes, methane, and TGNMOs were detected in all four air samples, and a low concentration of dichloromethane was detected in each of the four air samples (AA-1 through AA-4). The results are discussed in Section 6.2, and field and laboratory data from ambient air monitoring are included in Appendix F.

1.3.6 SCAQMD Rule 431.1 Sulfur Monitoring

Monitoring for total reduced sulfur compounds (TRS) was conducted in accordance with the tiered methodology described in the Alternative Monitoring Plan for SCAQMD Rule 431.1, Bradley Landfill, dated April 1, 2003 (A/N 267044). The table below presents the tiered approach, which includes monitoring with colorimetric tubes and the collection of a ten-liter bag sample in a Tedlar bag from each LFG flare and gas plant inlet location. The Bradley Landfill is currently designated with a Tier I Action level.

Action Level	AQMD Modified Tiers	Sampling Requirement
Tier I	TS < 100 ppm	-Quarterly using Method 307-91 -Monthly using TUBE
Tier II	100 ppm ≤ TS <120 ppm	-Monthly using Method 307-91 -Weekly using TUBE
Tier III	120 ppm < TS <130 ppm	-Weekly using Method 307-91 -Daily using TUBE
Tier IV	TS > 130 ppm	-Potential Rule 431.1 Violation -Inform AQMD immediately following R430 Breakdown Provisions -Daily using Method 307-91

Collected samples are analyzed within 24 hours in accordance with SCAQMD Method 307-91. A detailed discussion of the sulfur content is discussed in Section 5.2.

Monthly H₂S sampling with a colorimetric tube was conducted on October 21 and 27, November 18, and December 23, 2005. Quarterly H₂S sampling using Method 307-91 was conducted on November 23, 2005. Samples were collected in 10-liter tedlar bags and were sent to AtmAA, Inc. for testing as required by Rule 431.1. Sulfur monitoring results are summarized below. Analytical results are presented in Appendix E.

Table 1-1				
Sulfur Monitoring Results				
Date	Compressor (Gas Sales)	Flare 1 H ₂ S concentration (ppmv)	Flare 2 H ₂ S concentration (ppmv)	Flare 3 H ₂ S concentration (ppmv)
Colorimetric Tube Results				
10/21/05	50	45	40	
10/27/05				20
11/18/05	59	40	25	20
12/23/05	40	45	40	20
Laboratory Results				
11/23/05	54.8	47.7	27.6	16.1

1.3.7 Recent Landfill Activity

Landfill operations limited integrated and instantaneous surface emission monitoring in some areas of the landfill. Active filling areas where monitoring could not be conducted are shown on Figure 1. In October 2005, the active filling locations were Grids 116, 117, 119, 120, 121, 122, 125, and 126. Active filling locations in November 2005 were Grids 115, 116, 117, 119, 120, and 125. In December 2005, active filling locations were Grids 90, 96, 99, 103, 106, 110, 115, 117, 119, and 120.

2 SUBSURFACE PERIMETER PROBE MONITORING §1150.1(e)(1)

2.1 Subsurface Perimeter Probe Monitoring Protocol

Subsurface perimeter probe monitoring was performed in October, November, and December 2005. Monthly gas samples are collected from perimeter probes yielding the highest field-obtained TOC concentrations in percent by volume, measured as methane. Locations of the subsurface perimeter monitoring probes are shown on Figure 1, Surface Emissions Monitoring Site Plan.

Alternative monitoring procedures were used in the area of perimeter probe E-8D. These procedures include monitoring of the probes and performing surface emission monitoring of Grid 31-D, as specified in the Rule 1150.1 Compliance Plan for Bradley Landfill. The alternative procedures are implemented when TOC concentrations meet or exceed five (5) percent by volume, measured as methane.

Static pressure, in inches of water column, was measured prior to evacuating each probe. Probes were evacuated at a continuous rate until a stable methane concentration was observed. During the fourth quarter of 2005, a calibrated GEM-2000 Gas Extraction Monitor was used to measure methane by percent volume, methane by percent of LEL, oxygen by percent volume, carbon dioxide by percent volume, balance gas (nitrogen) by percent volume and static pressure in inches of water column.

2.2 Subsurface Perimeter Probe Monitoring Results

Perimeter probes with the highest field-obtained TOC concentrations, taken during the monthly monitoring event for each month, were selected to be sampled for laboratory analysis of TOC as methane. During the monthly probe monitoring events, field readings were taken on October 24 and 27, November 21, and December 12, 2005 for all probes. Methane was not detected over 5 percent in any of the probes during the October and November monthly probe monitoring events. Although no methane was detected in Probe E-8D on October 24 or November 21, 2005, Tedlar bag samples were collected on October 28 and November 23, 2005 since this probe has historically shown methane concentrations measuring above 50 percent. On December 12, 2005 methane was detected in Probe E-8D at 55.2 percent and a tedlar bag sample from Probe E-8D was collected. Laboratory analysis of gas from Probe E-8D yields more consistent TOC as methane concentrations than readings taken with the GEM 2000. The fourth quarter 2005 laboratory bag samples collected on October 28, November 23, and December 12, 2005

from Probe E-8D contained concentrations of 18.2, 50.2, and 48.1 percent TOC as methane, respectively, as reported by the laboratory. Field and laboratory data for perimeter probe monitoring are provided in Appendix B.

Perimeter probes that were selected to be sampled for each month are listed below:

Table 2-1			
Perimeter Probe Sampling Results			
Month	Probe #	Field TOC as methane Concentration (%)	Lab TOC as Methane Concentration (%)
¹ Oct-05	E-8D	0.0	18.2
² Nov-05	E-8D	0.0	50.2
Dec-05	E-8D	55.2	48.1

¹ The October 2005 probe monthly monitoring event took place on October 24, 2005 and Probe E-8D was sampled on October 28, 2005.

² The November 2005 probe monthly monitoring event took place on November 21, 2005 and Probe E-8D was sampled on November 23, 2005.

3 INTEGRATED SURFACE EMISSION SAMPLING §1150.1(e)(2)

3.1 Integrated Surface Emission Sampling Protocol

The fourth quarter 2005 integrated surface emission monitoring and sampling was conducted on November 15, 16, and 28, 2005. Monitoring and sampling were conducted consistent with SCAQMD's Guidelines for Implementation of Rule 1150.1.

Prior to sampling, the landfill surface was divided into approximate 50,000 square-foot grids with the majority of the grids having dimensions 100 feet by 500 feet. Figure 3, Integrated Surface Grids Location Map, shows the location of each grid.

Integrated surface sampling (ISS) equipment, field protocol, and QA procedures used in this program were derived from the SCAQMD Guidelines for Implementation of Rule 1150.1, in accordance with the compliance plan for the landfill. RES Environmental, Inc. (RES) technicians sampled each grid using the walk pattern and collection rate specified in the guidelines. Each portable Integrated Sampler is comprised of a Tedlar bag, DC pump, and a calibrated flow controller. Each bag sampler is calibrated by a film (bubble meter) calibration method. Each Tedlar bag sample was purged three times with ultra-pure nitrogen before sampling and enclosed in a light-sealed box after sampling. Analyses were performed within 72 hours after sampling was conducted. Tedlar bag QA/QC checklist is in Appendix G.

Wind monitoring data recorded at the on-site wind station were reduced to calculate 10-minute average wind speeds for those times when sampling was performed. Each integrated grid sample was collected over a continuous 25-minute period.

RES technicians walked grids at approximate 25-foot intervals for a total of 2,600 linear feet in a period of 25 minutes. The integrated sampler wand was extended to no greater than one inch above the landfill surface. Integrated surface samples were collected at an approximate rate of 333 cubic centimeters per minute (cc/min). The technicians recorded the starting and ending time of each grid traverse, along with the average rotameter flow rate and the prevailing wind speed and direction. An OVA was used to measure the TOC concentration (in ppm, as methane) from each of the 10-liter bag samples collected from the pre-numbered grids.

The landfill sampling grids are divided into Types A, B, and C. All grid types are sampled quarterly. Type A surface grids have no exclusions from sampling, and sampling is conducted in accordance with Rule 1150.1. Type B surface grids contain steep slopes or steep slopes and dense vegetation. Sampling of Type B grids consists of sampling the toe and top of 128 and 130. Grids 121 and 122, each defined as a Type "B" Grid, have been re-designated as Type "A" Grids due to the additional refuse that has been put in place. Vacuum readings from all LFG extraction

Shaw Environmental, Inc.

wells located within Type B grids are recorded monthly and included in the quarterly report. Type C grids are located in the area of active recycling operations. Sampling of Type C surface grids are performed quarterly, during the integrated sampling event. Sampling of Type C surface grids consists of sampling a course of 2,600 linear feet but not less than 1,900 linear feet in each grid for a continuous 25-minute period, excluding stockpiles, stored equipment and recycling equipment. Vacuum readings from all gas extraction wells located within Type C active recycling grids are recorded monthly and included in the quarterly report. Vacuum readings recorded in the fourth quarter from the extraction wells located in Type B and C Grids are presented in Table 3-3.

Tedlar bag samples from Grids 3 and 6 were sent to AtmAA, Inc. for further analysis of toxic air contaminants, methane, and TGNMOs. Technicians responsible for transporting the integrated samples recorded pertinent information on a chain-of custody form included in Appendix C, Integrated Surface Emission Sampling. Additional personnel, including lab technicians, also recorded their signatures on the chain-of-custody form.

Integrated surface samples were collected when the average wind speed was less than five miles per hour and the instantaneous wind speed was less than ten miles per hour. Integrated samples were not collected within 72 hours of a rainstorm. Wind speed and direction measurements are tracked on the chart included in Appendix C, Integrated Surface Emission Sampling. Other weather data taken during integrated monitoring can also be found in Appendix C.

3.2 Integrated Surface Monitoring Results

The TOC as methane concentration collected from each grid is listed in Table 3-1, Integrated Surface Sampling Field Summary. Field data sheets are presented in Appendix C. All of the integrated TOC as methane readings were within compliance limits, as set forth by SCAQMD Rule 1150.1. Typically, the two samples having the highest field TOC as methane concentrations are sent to the laboratory for further analysis. The TOC as methane background reading was 5.0 ppm. During surface emissions monitoring, TOC as methane concentrations above background were no more than 15 ppm. Samples from Grids 3 and 111 were selected for laboratory analysis.

3.3 Integrated Surface Sampling Laboratory Results

Integrated samples were collected from Grids 3 and 111 and were transported to AtmAA, Inc. on November 28, 2005 for further analysis. Table 3-2, Integrated Surface Sampling, Laboratory Summary, lists the laboratory analysis methods and results.

Laboratory analysis by Method TO-15 of the sample from Grid 3 (Lab No. 03335-2) detected benzene, dichloromethane, carbon tetrachloride, toluene, and xylenes. The TGNMO concentration was 1.78 ppmv and the methane concentration was 9.54 ppmv.

Laboratory analysis by Method TO-15 of the sample from Grid 111 (Lab No. 03335-3) detected benzene, carbon tetrachloride, toluene, and xylenes. The TGNMO concentration was 2.15 ppmv and the methane concentration was 74.4 ppmv.

Table 3-1
Integrated Surface Sampling, Field Summary
Bradley Landfill and Recycling Center
Sun Valley, California

INSTRUMENT: OVA 128/88 DATE OF SAMPLING: November 15, 16, and 28, 2005
88-ISS Packs TECHNICIAN: RES Environmental Inc.

Grid I.D.	TOC CONCENTRATION ABOVE BACKGROUND LEVELS (ppmv)	Sample Date	ACTION TAKEN TO REPAIR LEAK	DATE OF REPAIR	DATE OF ANY REQUIRED RE- MONITORING	RE-MONITORED CONCENTRATION (ppmv)
1	5	11/15/2005	NA			
2	10	11/15/2005	NA			
3	25	11/15/2005	NA			
4	5	11/15/2005	NA			
5	5	11/15/2005	NA			
6	3	11/15/2005	NA			
7	3	11/15/2005	NA			
8	0	11/15/2005	NA			
9	0	11/15/2005	NA			
10	0	11/15/2005	NA			
11	0	11/28/2005	NA			
12	0	11/28/2005	NA			
13	1	11/28/2005	NA			
14	2	11/28/2005	NA			
15	0	11/28/2005	NA			
16	3	11/28/2005	NA			
17	3	11/28/2005	NA			
18	0	11/28/2005	NA			
19	0	11/28/2005	NA			
20	0	11/15/2005	NA			
21	0	11/15/2005	NA			
22	0	11/15/2005	NA			
23	0	11/15/2005	NA			
24	0	11/15/2005	NA			
25	0	11/28/2005	NA			
26	1	11/28/2005	NA			
27	0	11/28/2005	NA			
28	0	11/28/2005	NA			
29	0	11/28/2005	NA			
30	0	11/28/2005	NA			
31	0	11/28/2005	NA			
32	0	11/15/2005	NA			
33	0	11/15/2005	NA			
34	0	11/15/2005	NA			
35	0	11/15/2005	N/A			
36	0	11/15/2005	N/A			
37	0	11/15/2005	NA			
38	0	11/15/2005	NA			
39	0	11/16/2005	NA			
40	0	11/16/2005	NA			
41	1	11/15/2005	NA			
42	0	11/15/2005	NA			
43	1	11/15/2005	NA			
44	0	11/15/2005	N/A			
45	0	11/16/2005	NA			
46	0	11/15/2005	NA			
47	0	11/16/2005	NA			
48	0	11/15/2005	NA			
49	0	11/16/2005	NA			
50	3	11/15/2005	NA			
51	0	11/15/2005	NA			
52	0	11/16/2005	NA			
53	5	11/15/2005	NA			
54	0	11/15/2005	NA			
55	0	11/16/2005	NA			

Table 3-1
Integrated Surface Sampling, Field Summary
Bradley Landfill and Recycling Center
Sun Valley, California

INSTRUMENT: OVA 128/88 DATE OF SAMPLING: November 15, 16, and 28, 2005
88-ISS Packs TECHNICIAN: RES Environmental Inc.

Grid I.D.	TOC CONCENTRATION ABOVE BACKGROUND LEVELS (ppmv)	Sample Date	ACTION TAKEN TO REPAIR LEAK	DATE OF REPAIR	DATE OF ANY REQUIRED RE- MONITORING	RE-MONITORED CONCENTRATION (ppmv)
56	5	11/15/2005	NA			
57	5	11/15/2005	NA			
58	0	11/15/2005	NA			
59	0	11/16/2005	NA			
60	0	11/16/2005	NA			
61	0	11/16/2005	NA			
62	1	11/28/2005	NA			
63	2	11/28/2005	NA			
64	3	11/15/2005	NA			
65	0	11/15/2005	NA			
66	0	11/16/2005	NA			
67	3	11/15/2005	NA			
68	0	11/15/2005	NA			
69	3	11/15/2005	NA			
70	0	11/15/2005	NA			
71	0	11/15/2005	NA			
72	0	11/16/2005	NA			
73	0	11/16/2005	NA			
74	0	11/28/2005	NA			
75	25	11/15/2005	NA			
76	3	11/15/2005	NA			
77	0	11/15/2005	NA			
78	5	11/15/2005	NA			
79	0	11/15/2005	NA			
80	0	11/16/2005	NA			
81	0	11/16/2005	NA			
82	1	11/15/2005	NA			
83	0	11/16/2005	NA			
84	0	11/16/2005	NA			
85	0	11/16/2005	NA			
86	3	11/15/2005	NA			
87	0	11/16/2005	NA			
88	3	11/15/2005	NA			
89	0	11/16/2005	NA			
90	0	11/16/2005	NA			
91	0	11/28/2005	NA			
92	3	11/28/2005	NA			
93	3	11/15/2005	NA			
94	3	11/15/2005	NA			
95	0	11/16/2005	NA			
96	3	11/28/2005	NA			
97	1	11/15/2005	NA			
98	0	11/16/2005	NA			
99	0	11/28/2005	NA			
100	3	11/28/2005	NA			
101	0	11/15/2005	NA			
102	0	11/16/2005	NA			
103	0	11/28/2005	NA			
104	0	11/15/2005	NA			
105	0	11/16/2005	NA			
106	2	11/28/2005	NA			
107	3	11/15/2005	NA			
108	5	11/15/2005	NA			
109	0	11/16/2005	NA			
110	2	11/28/2005	NA			

Table 3-1
Integrated Surface Sampling, Field Summary
Bradley Landfill and Recycling Center
Sun Valley, California

INSTRUMENT: OVA 128/88 DATE OF SAMPLING: November 15, 16, and 28, 2005
88-ISS Packs TECHNICIAN: RES Environmental Inc.

Grid I.D.	TOC CONCENTRATION ABOVE BACKGROUND LEVELS (ppmv)	Sample Date	ACTION TAKEN TO REPAIR LEAK	DATE OF REPAIR	DATE OF ANY REQUIRED RE- MONITORING	RE-MONITORED CONCENTRATION (ppmv)
111	15	11/15/2005	NA			
112	5	11/15/2005	NA			
113	0	11/15/2005	NA			
114	0	11/16/2005	NA			
118	0	11/16/2005	NA			
121	0	11/28/2005	NA			
122	0	11/28/2005	NA			
123	0	11/16/2005	NA			
124	0	11/16/2005	NA			
126	0	11/28/2005	NA			
127	0	11/28/2005	NA			
128	0	11/28/2005	NA			
130	0	11/28/2005	NA			
131	2	11/28/2005	NA			
132	0	11/28/2005	NA			
Active Areas						
19						
115						
116						
117						
119						
120						
125						

A background level of 5 ppm was used.

Table 3-2
Integrated Surface Sampling Laboratory Summary
Bradley Landfill & Recycling Center (BLRC)
November 15, 16, and 28, 2005

SCAQMD Rule 1150.1 Components Analysis in Integrated Surface Tedlar Bag Samples			
Compound	Sample ISS Grid 3 Results (ppbV)	Sample ISS Grid 111 Results (ppbV)	Reporting Limit (ppbV)
Hydrogen Sulfide	<50	<50	50
Benzene	0.63	0.38	0.1
Benzyl Chloride	<0.4	<0.4	0.4
Carbon Tetrachloride	0.12	0.15	0.1
Chlorobenzene	<0.2	<0.2	0.2
Chloroform	<0.1	<0.1	0.1
1,1-Dichloroethane	<0.2	<0.2	0.2
1,1-Dichloroethylene	<0.2	<0.2	0.2
1,2-Dibromoethane	<0.2	<0.2	0.2
Dichlorobenzenes ⁽¹⁾	<1.1	<1.1	1.1
Dichloromethane	0.26	<0.2	0.2
1,2-Dichloroethane	<0.2	<0.2	0.2
1,1,1-Trichloroethane	<0.1	<0.1	0.1
Trichloroethene	<0.1	<0.1	0.1
Perchloroethene	<0.1	<0.1	0.1
Toluene	2.89	2.18	0.3
Total Xylenes*	3.23	2.03	0.1
Vinyl Chloride	<0.2	<0.2	0.2
SCAQMD Rule 1150.1 Components Analysis in Integrated Surface Tedlar Bag Samples			
Compound	Sample ISS Grid 3 Results (ppmV)	Sample ISS 111 Results (ppmV)	Reporting Limit (ppmV)
Methane	9.54	74.4	1
Total Non-Methane Organics (as methane)	1.78	2.15	1
<p>< Not detected at or above the method detection limit.</p> <p>*Total xylenes reported includes the sum of the detected concentrations of m- & p-xylenes and o-xylenes.</p> <p>(1) total amount containing meta, para, and ortho isomers</p>			

TABLE 3-3
LFG Well Data for "B" and "C" Monitoring Grids
Fourth Quarter 2005
Bradley Landfill, Sun Valley, California

Device ID	Date/Time	CH ₄ (%)	CO ₂ (%)	O ₂ (%)	Balance	Current Static Pressure	Adjusted Static Pressure	Current Differential Pressure	Current Temp	Current Flow	Adjusted Flow	Status	Grid Type
BR000001	10/5/2005 10:29	22.8	27.1	0.2	49.9	-1.3	-1.4	5.143	116	78	80	Min Flow	C
BR000001	11/16/2005 8:43	25.5	27.9	0.1	46.5	-0.6	-1	0.352	136	20	34	Min flow	C
BR000001	12/16/2005 11:45	38.1	33.2	0	28.7	-0.9	-0.9	1.201	135	38	37	Min flow	C
BR000002	10/5/2005 10:06	17.1	26.4	0.2	56.3	-2.1	-2.1	4.046	122	42	42	Min Flow	C
BR000002	11/16/2005 9:10	23.6	29	0.1	47.3	-1.6	-1.6	1.005	120	21	17	Min flow	C
BR000002	12/16/2005 11:25	31.5	32.3	0	36.2	-1.3	-1.4	0.109	120	7	7	Min flow	C
BR000003	10/5/2005 9:49	0.1	5	13.5	81.4	-0.4	-0.4	3.929	14	46	46	Min Flow	C
BR000003	11/16/2005 10:09	3.8	9.9	9.4	76.9	-10.2	-10.3	0.536	14	16	10	1/4 Open	C
BR000003	12/3/2005 11:37	4.1	10.2	9.2	76.5	-3.2	-3.2	0.53	14	16	9	1/4 Open	C
BR000004												Disconnected	C
BR000004	11/16/2005 9:53	9.6	18.8	0.4	71.2	-14	-13.4	5.328	154	49	48	1/2 Open	C
BR000004	12/3/2005 11:23	8.8	16.1	0.7	74.4	-15.5	-15.4	3.6	157	40	38	1/4 Open	C
BR000005												Disconnected	C
BR000005	11/16/2005 9:39	2	9.8	6	82.2	-19.4	-12.1	3.462	143	63	52	1/4 Open	C
BR000005	12/3/2005 11:06	3.4	11.7	5.4	79.5	-12.1	-12	2.088	148	49	50	Min flow	C
BR000006												Disconnected	C
BR000006	11/16/2005 9:19	11.2	22	1.9	64.9	-9.2	-2.8	15.416	158	84	37	1/4 Open	C
BR000006	12/3/2005 10:53	13.9	24.1	0.8	61.2	-3.2	-3.2	3.695	160	41	41	Min flow	C
BR000007												Disconnected	C
BR000007	11/10/2005 14:35	38.2	32.6	0	29.2	-3.8	-3.7	1.523	154	27	26	Min flow	C
BR000007	12/30/2005 9:34	19.4	25.8	0.5	54.3	-2.1	-2.2	1.086	162	22	22	Min flow	C
BR000008												Disconnected	C
BR000008												Disconnected	C
BR000008												Disconnected	C
BR000009	10/5/2005 8:37	29.6	33.2	0.6	36.6	-15.1	-5.1	1.726	116	9	12	Min Flow	C
BR000009												Disconnected	C
BR000009												Disconnected	C
BR000010	10/4/2005 14:42	34.8	35.2	0.2	29.8	-15.2	-15.2	1.168	138	13	12	1/4 Open	C
BR000010	11/10/2005 13:51	45.4	38.3	0	16.3	-15.7	-15.7	1.802	130	17	17	1/4 open	C
BR000010	12/1/2005 14:34	39.2	37.7	0	23.1	-17.7	-17.5	5.752	130	30	30	1/4 open	C
BR000011	10/4/2005 14:30	35.1	34.9	0.3	29.7	-16.9	-16.8	0.68	179	27	27	1/4 open	C
BR000011	11/29/2005 9:27	43.5	37.7	0	18.8	-19	-19.2	0.655	174	25	24	1/4 open	C
BR000011	12/1/2005 14:29	39.2	35.8	0	25	-19.1	-19.4	4.734	182	77	67	1/4 open	C

TABLE 3-3
LFG Well Data for "B" and "C" Monitoring Grids
Fourth Quarter 2005
Bradley Landfill, Sun Valley, California

Device ID	Date/Time	CH ₄ (%)	CO ₂ (%)	O ₂ (%)	Balance	Current Static Pressure	Adjusted Static Pressure	Current Differential Pressure	Current Temp	Current Flow	Adjusted Flow	Status	Grid Type
BR000014	10/5/2005 9:54	12.5	22.8	0.4	64.3	-1.2	-1.1	4.701	130	45	45	Min flow	C
BR000014	11/16/2005 10:14	18.9	25.6	0.2	55.3	-1.2	-1.2	1.023	0	23	19	Min flow	C
BR000014	12/16/2005 11:10	25.5	28.1	0	46.4	-0.9	-1	1.185	125	23	23	Min flow	C
BR000015	10/5/2005 9:42	12.7	18.4	0.2	68.7	-4.7	-4.7	4.109	142	70	69	Min flow	C
BR000015	11/16/2005 10:01	10.6	16.8	0.4	72.2	-18.3	-18.6	0.994	163	34	36	1/2 open	C
BR000015	12/3/2005 11:29	11.9	17.7	0.3	70.1	-20.3	-20.4	0.277	168	18	20	1/4 open	C
BR000016	10/5/2005 9:59	40.9	35.3	0.2	23.6	-3.9	-3	4.053	102	26	26	1/4 open	C
BR000016	11/16/2005 10:30	52.4	39.1	0.1	8.4	-0.1	-0.1	0.105	91	4	5	Full open	C
BR000016	12/16/2005 11:17	52.4	39.7	0	7.9	-5.4	-3.2	0.386	95	8	4	Full open	C
BR000017	10/5/2005 9:12	18.6	25.8	0.4	55.2	-1.6	-1.6	4.177	116	26	26	Min flow	C
BR000017	11/28/2005 9:58	7.3	10.1	9.8	72.8	-0.4	-0.2	0.599	102	10	11	Min flow	C
BR000017	12/30/2005 9:26	24	28.4	0	47.6	-1.6	-1.6	1.11	116	13	13	Min flow	C
BR000018	10/5/2005 9:32	21.5	22.9	0.2	55.4	-2.5	-1.1	3.852	126	68	68	Min flow	C
BR000018	11/16/2005 9:46	13.3	21.1	0.6	65	-22.7	-22.8	0.806	128	30	30	1/2 open	C
BR000018	12/3/2005 11:15	12.5	19.1	0.3	68.1	-23.5	-23.3	2.041	128	48	26	1/2 open	C
BR000019	10/5/2005 10:37	34.6	34.4	0.3	30.7	-8.1	-8.5	6.735	147	55	54	Full open	C
BR000019	11/16/2005 10:22	49.2	36.5	1.1	13.2	-0.5	-0.5	0.078	89	6	6	Full open	C
BR000019	12/21/2005 11:07	56.2	41.8	0.5	1.5	0	0	-0.003	0			Full open	C
BR000020	10/5/2005 10:53	31.8	31.9	0.3	36	-3.5	-3.4	4.116	120	43	45	Min flow	C
BR000020	11/16/2005 10:52	54.8	39.9	0.3	5	-0.4	-0.2	0.057	100	5		1/4 open	C
BR000020	12/21/2005 10:47	58.4	39.5	0.5	1.6	0	0	-0.018	0			1/4 open	C
BR000021	10/5/2005 10:58	27.4	29.9	0.2	42.5	-3.3	-3.6	7.26	122	57	58	Min flow	C
BR000021	11/16/2005 10:57	45.4	34	1.3	19.3	-0.3	-0.2	0.086	78	6	6	Min flow	C
BR000021	12/21/2005 10:52	56.8	39.8	0.8	2.6	0	0	-0.042	0			1/4 open	C
BR000022												Disconnected	C
BR000022												Disconnected	C
BR000022	12/21/2005 10:59	39.5	30.4	4.4	25.7	0	0	0.011	0	0	0	1/4 open	C
BR000025	10/4/2005 13:31	53.2	41.5	0.3	5	-11.7	-11.6	2.429	128	54	54	Full open	C
BR000025	11/29/2005 9:09	56.6	42.2	0	1.2	-13	-13	2.976	125	60	60	Full open	C
BR000025	12/30/2005 9:56	56.3	42.5	0	1.2	-11.8	-11.9	3.214	125	62	61	Full open	C
BR000026	10/5/2005 8:30	47.9	39.6	0.2	12.3	-17.4	-18.8	0.128	140	2	2	Full open	C
BR000026	11/10/2005 13:07	51.9	40.7	0.3	7.1	-2	-2	0.272	118	3	3	Full open	C
BR000026	12/21/2005 11:24	54.7	40	0.2	5.1	-16.4	-15.4	0.255	115	3	4	Full open	C

TABLE 3-3
LFG Well Data for "B" and "C" Monitoring Grids
Fourth Quarter 2005
Bradley Landfill, Sun Valley, California

Device ID	Date/Time	CH ₄ (%)	CO ₂ (%)	O ₂ (%)	Balance	Current Static Pressure	Adjusted Static Pressure	Current Differential Pressure	Current Temp	Current Flow	Adjusted Flow	Status	Grid Type
BR000027	10/5/2005 8:24	28.3	31.8	0.2	39.7	-10.7	-10.7	3.316	132	38	42	1/4 open	C
BR000027	11/10/2005 14:08	38.7	32.8	0.2	28.3	-6.9	-7.1	2.186	132	31	34	1/4 open	C
BR000027	12/3/2005 10:14	42.1	34.5	0	23.4	-9.3	-9.3	3.46	132	40	43	1/4 open	C
BR000028	10/4/2005 14:49	28.9	32.4	0.2	38.5	-6.6	-7	12.509	0	0	0	Min Flow	C
BR000028												Disconnected	C
BR000028												Disconnected	C
BR000031	10/4/2005 11:26	1.2	19.2	0.3	79.3	-0.5	-0.5	0.05	110	4	3	Min flow	C
BR000031	11/29/2005 10:47	1.9	20.5	0	77.6	-0.1	-0.1	0.422	110	13	15	Min flow	C
BR000031	12/30/2005 10:05	2.5	19.9	0	77.6	-0.8	-0.7	1.369	115	24	24	Min flow	C
BR000033	10/4/2005 11:01	18.8	27.6	0.5	53.1	-1.3	-1.2	2.066	109	30	30	Min flow	C
BR000033	11/23/2005 11:00	26.2	30.9	0	42.9	-1.5	-1.5	3.316	144	38	38	Min flow	C
BR000033	12/3/2005 16:09	33.6	31.6	0.1	34.7	-1.9	-4.5	3.771	142	41	71	1/2 open	C
BR000034												Disconnected	C
BR000034	11/23/2005 9:58	8.3	24.6	0.1	67	-0.9	-0.9	0.042	173	4	5	Min flow	C
BR000034	12/3/2005 16:03	10	23.4	0	66.6	-4.2	-4.2	9.934	177	75	81	1/2 open	C
BR000036												Disconnected	C
BR000036	11/23/2005 9:49	8.1	21.9	1.4	68.6	-2.6	-2.7	5.678	167	52	48	Min flow	C
BR000036	12/3/2005 15:57	7.1	20.4	1.5	71	-2.3	-3.5	5.724	174	55	79	1/4 open	C
BR000039	10/4/2005 9:04	16.8	27.7	1.2	54.3	-0.4	-0.4	1.504	121	25	26	Min flow	C
BR000039	11/10/2005 8:46		26.5	1	58.6	-0.6	-0.6	0.681	120	17	17	Min flow	C
BR000039	12/1/2005 10:25	11.7	25.1	1	62.2	-0.7	-0.8	4.564	121	44	44	Min flow	C
BR000084	10/5/2005 10:16	45.2	38.3	0.2	16.3	-12.5	-13	21.965	160	102	103	1/2 open	C
BR000084	11/16/2005 8:27	50.1	39.6	0	10.3	-11.5	-11	15.676	155	86	87	1/2 open	C
BR000084	12/16/2005 11:33	53.3	40.7	0	6	-11.6	-11.2	18.921	157	95	95	1/2 open	C
BR00023D	10/5/2005 10:43	40.3	36	0.6	23.1	-2.5	-2.9	4.458	113	45	45	Full open	C
BR00023D	11/16/2005 10:37	44.9	37	0.3	17.8	-1	-0.8	0.231	101	10	5	Full open	C
BR00023D	12/21/2005 10:38	59	40.5	0.3	0.2	-0.5	-0.6	-0.322	0			Full open	C
BR00023S	10/5/2005 10:46	56.2	42.2	0.2	1.4	-2.7	-2.5	3.881	121	25	25	Full open	C
BR00023S	11/16/2005 10:41	58	41.2	0.2	0.6	-0.9	-0.8	0.193	106	5	6	Full open	C
BR00023S	12/21/2005 10:43	58.7	39.3	0.3	1.7	0	0	-0.061	0			1/4 open	C
BR00105D	10/4/2005 15:06	46	35.7	3.2	15.1	-1.4	-1.5	0.123	125	0	0	1/2 open	C
BR00105D	11/29/2005 9:37	40.8	30.8	5.2	23.2	-0.5	-0.6	0.295	86	20	20	1/2 open	C
BR00105D	12/21/2005 11:17	51.1	36.3	2.5	10.1	0	0	-0.007	0		1	1/2 open	C

TABLE 3-3
LFG Well Data for "B" and "C" Monitoring Grids
Fourth Quarter 2005
Bradley Landfill, Sun Valley, California

Device ID	Date/Time	CH ₄ (%)	CO ₂ (%)	O ₂ (%)	Balance	Current Static Pressure	Adjusted Static Pressure	Current Differential Pressure	Current Temp	Current Flow	Adjusted Flow	Status	Grid Type
BR00105S	10/4/2005 15:10	50.3	40	0.2	9.5	-1.3	-1.4	0.519	139	0	0	Full open	C
BR00105S	11/29/2005 9:59	41.2	31.5	5	22.3	-0.5	-0.4	0.309	81	20	20	1/4 open	C
BR00105S	12/21/2005 11:20	52.6	37	0.3	10.1	0	0	0.002	0	1		1/4 open	C
BR00106D	10/4/2005 14:17	37.3	29.5	6	27.2	-1.4	-1.5	0.133	123	4	4	1/4 open	C
BR00106D	11/29/2005 10:23	26.1	21.7	9.8	42.4	-3.7	-3.8	3.269	113	23	23	Min flow	C
BR00106D	12/1/2005 14:16	30.4	24.4	8.2	37	-3	-3	6.741	115	33	33	Min flow	C
BR00106S	10/4/2005 14:22	31	28.3	4.8	35.9	-3.5	-2.4	7.763	136	36	25	1/4 open	C
BR00106S	11/29/2005 10:31	40.7	31.7	3.7	23.9	-3.4	-3.4	6.316	136	32	32	Min flow	C
BR00106S	12/1/2005 14:20	41.7	32.9	3.2	22.2	-3.2	-3.2	12.047	136	45	45	Min flow	C
BR0EW100	10/4/2005 14:54	17.7	26.1	0.2	56	-10.9	-10.8	1.259	109	40	40	Min flow	C
BR0EW100	11/29/2005 9:18	22.3	27.5	0	50.2	-2.5	-2.5	0.35	114	21	21	Min flow	C
BR0EW100	12/3/2005 10:07	21.9	27.6	0	50.5	-2	-2	0.056	110	8	8	Min flow	C

4 INSTANTANEOUS SURFACE EMISSION MONITORING §1150.1(e)(3)

4.1 Instantaneous Surface Emission Monitoring Protocol

Quarterly instantaneous surface emission monitoring was conducted in October, November, and December 2005 by RES Inc. technicians and consisted of monitoring the landfill surface for the presence of LFG surface emissions. Instantaneous Surface Monitoring (ISM) was performed using procedures and equipment described in the SCAQMD Guidelines for Implementation of Rule 1150.1 and was consistent with the compliance plan for the Landfill.

A portable flame ionization detector (FID), which meets or exceeds all guideline specifications was used to obtain instantaneous measurements of TOC as methane concentrations immediately above the surface of the grids. Calibrations were performed on the OVA equipment using factory specifications. While traversing the disposal area, the detector probe was held within 0 to 3 inches above the landfill surface to obtain the readings. A surface inspection was also performed during monitoring to identify potential cracks in the landfill cover.

Using the OVA, RES technicians walked a pattern across the landfill surface consisting of linear traverses approximately 100 feet apart at an approximate rate of 100 to 110 feet per minute. TOC as methane measurements were recorded at approximately every 100 linear feet. While monitoring, the OVA wand and funnel assembly was held no further than 0 to 3 inches above the landfill surface.

In addition to walking the traverses, the OVA was used by Shaw personnel to measure TOC as methane concentrations at landfill surface fissures, along the refuse/natural soil interface, and at corrugated metal pipes, gas extraction wells and other points visually identified as areas potentially having repeatable TOC as methane concentrations greater than 500 ppm.

The landfill sampling grids are divided into Types A, B, and C. Type A surface grids have no exclusions from sampling and sampling is conducted in accordance with Rule 1150.1. Type B surface grids contain steep slopes or steep slopes and dense vegetation. Sampling of Type B grids consists of sampling the toe and top of Grids 128 and 130. Vacuum readings from gas extraction well 39, located within a Type B grid, is recorded monthly and included in the quarterly report. Twenty-two Type C grids are located in the area of active recycling operations. Sampling of Type C surface grids consists of sampling a course of 2,600 linear feet but not less than 1,900 linear feet in each grid for a continuous 25-minute period, excluding stockpiles, stored equipment and recycling equipment. Vacuum readings from all LFG extraction wells located within Type C active recycling grids are recorded monthly and included in the quarterly report.

Vacuum readings recorded in the fourth quarter from the extraction wells located within Type B and C grids are presented in Table 3-3.

Areas that were not monitored due to active landfill operations are shown on Figure 1.

Wind speed and direction were measured using a Climatronics portable meteorological station mounted on the roof of the main office building at the landfill described in Section 7, Field Instrumentation and Equipment Specifications. Measurements were recorded on a continuous strip chart recorder. The wind speed and direction monitor was erected in the central portion of the site away from canyon walls and obstructions at an approximate elevation of 1,300 feet above mean sea level.

4.2 Instantaneous Surface Emission Monitoring Results

Monitoring measurements obtained during the month of October exceeded 500 ppm as methane in Grids 2, 4, 5, 93, and 112. Monitoring measurements in November exceeded 500 ppm as methane in Grids 2, 4, 5, 6, 33, 75, 76, 84, 88, 89, 93, 96, 107, 118, 124, and 127. Monitoring measurements in December exceeded 500 ppm as methane in Grids 2, 4, 5, 89, 105, 107 and 111. Grids with surface emissions exceeding 500 ppm are shown in Table 4-1. All other grids were below 500 ppm TOC as methane.

Recorded concentrations of TOC as methane in the grids ranged from 0 to 100,000 ppm above background. In accordance with SCAQMD Rule 1150.1 regarding detecting TOC as methane concentrations exceeding 500 ppmv, each of these grids were re-sampled within 10 calendar days of the original detection. Remonitored concentrations in these grids all measured below 500 ppmv. Remonitoring results are shown in Table 4-1. Figures 1, 2, and 3 show grids where surface emissions exceeded 500 ppm TOC as methane during instantaneous monitoring. During the period of instantaneous monitoring, the wind speed average was below 5 miles per hour and the instantaneous wind speed was below 10 miles per hour.

Table 4-1
Instantaneous Emission Monitoring Results
Bradley Landfill & Recycling Center, Sun Valley, CA

INSTRUMENT: OVA 128/88

SAMPLING PERIOD: 4TH QUARTER 2005
 TECHNICIAN: RES

LOCATION OF LEAK	LEAK CONCENTRATION (ppmv)	DATE OF DISCOVERY	ACTION TAKEN TO REPAIR LEAK	DATE OF REPAIR	DATE OF ANY REQUIRED RE- MONITORING	RE-MONITORED CONCENTRATION (ppmv)
2	5,000	10/10/05	Repaired surface slope	10/10/05	10/20/2005	5 - 6
4	10,000	10/10/05	Repaired surface slope	10/10/05	10/20/2005	200 - 300
5	10,000	10/10/05	Repaired Well 87	10/10/05	10/20/2005	5 - 6
93	5,000	10/10/05	Repaired Well 205	10/10/05	10/12/2005	20 - 50
112	10,000	10/10/05	Repaired surface slope	10/10/05	10/20/2005	200 - 300
2	100,000	11/16/05	Repaired surface slope	11/16/05	11/17/2005	400 - 800
2	400 - 800	11/17/05	Repaired surface slope	11/17/05	12/6/2005	20 - 40
4	5,000	11/16/05	Repaired surface slope	11/16/05	11/17/2005	800 - 1,000
4	800 - 1,000	11/17/2005	Repaired surface slope	11/17/05	12/6/2005	80 - 100
5	10,000	11/16/05	Repaired Well 87	11/16/05	11/17/2005	40 - 60
6	10,000	11/16/05	Repaired Well 86 & repaired surface slope	11/16/05	11/25/2005	10 - 40
33	3,000	11/16/05	Repaired Well 90	11/16/05	11/25/2005	5 - 10
75	100,000	11/16/05	Repaired surface slope	11/16/05	11/17/2005	40 - 80
76	10,000	11/16/05	Repaired Well 13	11/16/05	11/17/2005	5 - 10
84	5,000	11/16/05	Repaired Well 53	11/16/05	11/17/2005	60 - 100
88	5,000	11/16/05	Repaired Well 74	11/16/05	11/17/2005	20 - 60
89	5,000	11/16/05	Repaired Well 63	11/16/05	11/17/2005	80 - 100
93	10,000	11/16/05	Repaired Well 205	11/16/05	11/17/2005	18 - 20
96	5,000	11/16/05	Repaired surface slope	11/16/05	11/17/2005	40 - 80
107	10,000	11/16/05	Repaired Well 17 & repaired surface slope	11/16/05	11/17/2005	5 - 7
118	5,000	11/16/05	Repaired Well 36	11/16/05	11/17/2005	5 - 10
124	5,000	11/16/05	Repaired Well 23	11/16/05	11/17/2005	5 - 10
127	1,000	11/16/05	Repaired Well P25	11/16/05	11/17/2005	5 - 10
2	5,000	12/20/05	WM repaired surface areas Shaw repaired well No. 45	12/20/05	12/29/2005	5 - 20
4	5,000	12/20/05	Repaired Well 87	12/20/05	12/29/2005	5 - 7
89	1,000	12/20/05	Repaired Well EW63	12/20/05	12/29/2005	5 - 40
105	2,000	12/20/05	Repaired Well 208	12/20/05	12/29/2005	5 - 10
107	1,000	12/20/05	Repaired Wells 17 D/S and 19 D/S	12/20/05	12/29/2005	5 - 6
111	2,000	12/20/05	WM repaired surface areas	12/20/05	12/29/2005	5 - 40

COMMENTS: Any component leak that meets or exceeds the 500 ppmv Methane limit must be repaired within 10 days.

5 LANDFILL GAS SAMPLING §1150.1(e)(4)

5.1 Landfill Gas Characterization Protocol

Quarterly LFG samples were collected from the gas compressor and the three (3) LFG flares on November 23, 2005. A portable pump was used to draw the LFG sample into a 10-liter Tedlar Bag enclosed in a light sealed box. The LFG sample was collected over a continuous ten-minute period.

5.2 Landfill Gas Sample Laboratory Results

Samples BL-002 (Gas Plant), BL-003 (Flare #1), BL-004 (Flare #2), and BL-005 (Flare #3), were taken to AtmAA, Inc. on November 23, 2005. The gas samples were analyzed for toxic air contaminants, TGNMOs, fixed gases, and hydrogen sulfide. Table 5-2, Landfill Gas Sample Laboratory Summary, gives the laboratory methods and results for these constituents. Appendix E, Landfill Gas Sampling includes the laboratory report prepared by AtmAA, Inc.

Samples BL-002, BL-003, BL-004, and BL-005, contained detectable concentrations of one or more of the following compounds: benzene, chlorobenzene, 1,1-dichloroethane, 1,1-dichloroethylene, dichloromethane, dichlorobenzenes, 1,2-dichloroethane, trichloroethene, perchloroethylene, toluene, vinyl chloride, and total xylenes. Laboratory results for samples collected from the gas plant and each flare are presented in Appendix E.

5.3 SCAQMD Rule 431.1 Sulfur Monitoring

Laboratory landfill gas results for quarterly samples taken from the gas compressor and the 3 flares are summarized in Tables 5-1 through 5-3. Analytical results are located in Appendix E.

Table 5-1 - Landfill Gas Summary of Results				
Components	Gas Compressor (BL-002)	Flare 1 (BL-003)	Flare 2 (BL-004)	Flare 3 (BL-005)
TGNMO (ppmv)	17,700	7,720	2,900	6,330
Hydrogen Sulfide (ppmv)	54.8	47.7	27.6	16.1
Methane (%)	43.1	43.9	24.8	29.0

Table 5-2
Landfill Gas Sample - Laboratory Summary
Bradley Landfill & Recycling Center (BLRC)
November 23, 2005

SCAQMD Rule 1150.1 Components Analysis in Integrated Surface Tedlar Bag Samples					
Compound	Gas Plant BL-002 (ppbV)	Flare #1 BL-003 (ppbV)	Flare #2 BL-004 (ppbV)	Flare #3 BL-005 (ppbV)	Reporting Limit (ppbV)
Benzene	4,360	6,200	1,260	8,880	20
Benzyl Chloride	<40	<40	<40	<40	40
Carbon Tetrachloride	<30	<30	<30	<30	30
Chlorobenzene	382	209	212	263	30
Chloroform	<20	<20	<20	<20	20
1,1-Dichloroethane	230	208	67.2	113	20
1,1-Dichloroethylene	82.8	72.6	<40	44.6	40
Dichloromethane	732	752	<30	218	30
1,2-Dibromoethane	<30	<30	<30	<30	30
Dichlorobenzenes ⁽¹⁾	4,140	816	746	569	30
1,2-Dichloroethane	97.7	74.0	25.4	40.5	20
Trichloroethene	754	602	186	323	20
Perchloroethylene	2,740	1,780	811	916	20
Toluene	57,400	39,400	6,000	21,500	20
1,1,1-trichloroethane	<20	<20	<20	<20	20
Total Xylenes*	54,400	21,450	9,810	13,230	20
Vinyl Chloride	264	301	603	263	20
Compound	(ppmV)	(ppmV)	(ppmV)	(ppmV)	(ppmV)
Total Non-Methane Organics (as Methane)	17,700	7,720	2,900	6,330	20
Hydrogen sulfide	54.8	47.7	27.6	16.1	0.5
Carbonyl sulfide	0.30	0.41	0.23	0.32	0.08
Methyl mercaptan	4.86	4.75	0.75	3.48	0.06
Ethyl mercaptan	<0.1	<0.1	0.16	<0.1	0.1
Dimethyl sulfide	7.03	6.63	0.70	6.43	0.1
Carbon disulfide	0.092	0.10	0.28	0.10	0.09
Isopropyl mercaptan	0.32	0.33	<0.06	0.15	0.06
n-propyl mercaptan	<0.06	<0.06	<0.06	<0.06	0.06
Dimethyl disulfide	0.44	0.42	0.39	0.54	0.06
Total reduced sulfur	68.4	47.7	27.6	16.1	0.5
BTU / ft.3	450	450	253	298	1

Table 5-2 (Continued)
Landfill Gas Sample - Laboratory Summary
Bradley Landfill & Recycling Center (BLRC)
November 23, 2005

SCAQMD Rule 1150.1 Components Analysis in Integrated Surface Tedlar Bag Samples					
Compound	Gas Plant (%,V)	Flare #1 BL-002 (%,V)	Flare #2 BL-003 (%,V)	Flare #3 BL-001 (%,V)	Reporting Limit (%,V)
Nitrogen	16.2	15.6	45.2	36.8	0.1
Oxygen	1.16	1.02	4.52	5.16	0.1
Methane	43.1	43.9	24.8	29.0	0.1
Carbon dioxide	36.7	37.1	24.4	26.4	0.1
ND: Not detected. *Total xylenes reported includes the sum of the detected concentrations of m-& p-xylenes and o-xylenes. ** = Coeluting Compounds The reported oxygen concentration includes any argon present in the sample. Calibration is based on a standard atmosphere containing 20.95% oxygen and 0.93% argon. (1) Total amount containing meta, para, and ortho isomers.					

Table 5-3
Quarterly H₂S Monitoring Results

Bradley Landfill, Sun Valley, California

DATE	TIME	TEMP °F	PLANT GAS SALES	FLARE 1	FLARE 2	FLARE 3
Colorimetric Tube Sample Results						
10/21/2005	10:15	52	50	45	40	
10/27/2005	10:30	53				20
11/18/2005	8:15	56	59	40	25	20
12/23/2005	9:30	69	40	45	40	20
Quarterly H₂S Laboratory Results						
11/23/2005	9:30		54.8	47.7	27.6	16.1

Notes:

Monthly H₂S readings taken using a Draeger colorimetric tube.

H₂S Sample readings are no longer taken daily at the compressor and flaring system.

Analyses taken using a 10 liter bag sample and analyzed by AtmAA Inc. Laboratory.

6 AMBIENT AIR SAMPLING§1150.1(e)(5)

6.1 Ambient Air Sampling Protocol

Fourth quarter 2005 ambient air sampling was performed on November 6 and 7, 2005. Sampling was performed consistent with SCAQMD Rule 1150.1, Attachment A.

Four ambient air samplers were used to collect upwind (south) and downwind (north) samples. Two ambient air samplers were placed upwind at the landfill property boundary and two downwind at the landfill property boundary. Figure 1, Surface Emissions Monitoring Site Plan, shows the ambient air sample locations.

The ambient air sampling program was designed in accordance with the Guidelines for Implementation of Rule 1150.1 and the compliance plan requirements issued by the SCAQMD. All procedures and equipment used in the program are consistent with guideline specifications.

The Landfill compliance plan requires the collection of four (4) 12-hour samples located at the landfill perimeter. These 12-hour samples are representative of the predominant upslope and down slope wind flow patterns (two per location) during each 12-hour time periods. These locations were selected based upon evaluation of current and historic wind monitoring data collected on site. Sampling stations are positioned to provide good meteorological exposure to the predominant upslope flows and anticipated nighttime local air drainage patterns typically encountered at this site.

Ambient air samplers used at the landfill were constructed, installed, and operated to meet SCAQMD design criteria and performance specifications published in the Rule 1150.1 guidelines. Light-sealed boxes containing individual 10-liter Tedlar sample bags were housed within each sampling station enclosure. Analyses were performed within 72 hours after sampling was concluded

A Climatronics portable wind speed and direction station connected to a continuous recorder was used to record wind speed and direction for the entire duration of integrated sampling. Section 7, Field Instrumentation and Equipment Specifications, describes both the ambient air sampler assembly and the wind station in greater detail. Tedlar bags used for collecting the 24-hour integrated samples were purged three times with nitrogen and tested for leaks prior to usage. Appendix G, Tedlar Bag Quality Assurance and Control,

includes a Tedlar bag checklist that summarizes the pertinent data regarding this procedure

The four samples were analyzed for toxic air contaminants, methane, and TGNMOs by AtmAA, Inc. The technicians responsible for transporting the integrated samples recorded pertinent information on a Chain-of-Custody form included in Appendix F, Ambient Air Sampling. Additional personnel receiving the integrated samples recorded their signatures on the Chain-of-Custody form.

Ambient air samples were collected when the average wind speed was five miles per hour or less, and the instantaneous wind speed was less than fifteen miles per hour. The samples were not collected within 72 hours of a rainstorm. Wind speed and direction charts are included in Appendix F.

6.2 Ambient Air Laboratory Results

Upwind ambient air samples (AA-1, AA-4) and downwind ambient air samples (AA-2, AA-3) were sent to AtmAA, Inc. on November 8, 2005 for analysis. Table 6-1, Ambient Air Samples Laboratory Summary, summarizes the laboratory methods and results.

Upwind Samples

Laboratory analysis of sample AA-1 (Lab Sample 03135-6) detected a TGNMO concentration of 2.56 ppmv. The methane concentration was 3.92 ppmv, benzene concentration was 0.99 ppmv, dichloromethane concentration was 0.56, carbon tetrachloride concentration was 0.10 ppmv, toluene concentration was 3.04 ppmv, and total xylenes concentration was 1.69 ppmv.

Laboratory analysis of sample AA-4 (Lab Sample 03135-9) detected a TGNMO concentration of 2.19 ppmv. The methane concentration was 2.22 ppmv, benzene concentration was 0.80 ppmv, carbon tetrachloride concentration was 0.10 ppmv, toluene concentration was 2.33 ppmv, and total xylenes concentration was 1.35 ppmv.

Downwind Samples

Laboratory analysis of sample AA-2 (Lab Sample 03135-7) detected a TGNMO concentration of 2.30 ppmv. The methane concentration was 2.42 ppmv, benzene concentration was 0.98 ppmv, carbon tetrachloride concentration was 0.10 ppmv, toluene concentration was 2.79 ppmv, and total xylenes concentration was 1.69 ppmv.

Laboratory analysis of sample AA-3 (Lab Sample 03135-8) detected a TGNMO concentration of 2.06 ppmv. The methane concentration was 6.27 ppmv, benzene concentration was 0.99 ppmv, dichloromethane concentration was 0.64 ppmv, carbon

tetrachloride concentration was 0.10 ppmv, toluene concentration was 2.58 ppmv, and total xylenes concentration was 1.52 ppmv.

Table 6-1
Ambient Air Sampling Laboratory Summary
Bradley Landfill & Recycling Center (BLRC)
November 6 and 7, 2005

SCAQMD Rule 1150.1 Components Analysis in Ambient Air Tedlar Bag Samples			
Compound	Sample Ambient Air AA-1 Results (ppbV)	Sample Ambient Air AA-2 Results (ppbV)	Reporting Limit (ppbV)
Hydrogen Sulfide	<50	<50	50
Benzene	0.99	0.98	0.1
Benzyl Chloride	<0.4	<0.4	0.4
Carbon Tetrachloride	0.10	0.10	0.1
Chlorobenzene	<0.2	<0.2	0.2
Chloroform	<0.1	<0.1	0.1
1,1-Dichloroethane	<0.2	<0.2	0.2
1,1-Dichloroethylene	<0.2	<0.2	0.2
1,2-Dibromoethane	<0.2	<0.2	0.2
Dichlorobenzene ⁽¹⁾	<1.1	<1.1	1.1
Dichloromethane	0.56	0.49	0.1
1,2-Dichloroethane	<0.2	<0.2	0.2
1,1,1-Trichloroethane	<0.1	<0.1	0.1
Perchloroethene	0.10	<0.1	0.1
Toluene	3.04	2.79	0.1
Total Xylenes*	1.69	1.69	0.3
Trichloroethene	<0.1	<0.1	0.1
Vinyl Chloride	<0.2	<0.2	0.2
SCAQMD Rule 1150.1 Components Analysis in Ambient Air Tedlar Bag Samples			
Compound	Sample Ambient Air AA-1 Results (ppbV)	Sample Ambient Air AA-2 Results (ppbV)	Reporting Limit (ppmV)
Methane	3.92	2.42	1
Total Non-Methane Organics (as methane)	2.56	2.30	1

Table 6-1 (Continued)
Ambient Air Sampling Laboratory Summary
 Bradley Landfill & Recycling Center (BLRC)
 November 6 and 7, 2005

SCAQMD Rule 1150.1 Components Analysis in Ambient Air Tedlar Bag Samples			
Compound	Sample Ambient Air AA-3 Results (ppbV)	Sample Ambient Air AA-4 Results (ppbV)	Reporting Limit (ppbV)
Hydrogen Sulfide	<50	<50	50
Benzene	0.99	0.80	0.1
Benzyl Chloride	<0.4	<0.4	0.4
Carbon Tetrachloride	0.10	0.10	0.1
Chlorobenzene	<0.2	<0.2	0.2
Chloroform	<0.1	<0.1	0.1
1,1-Dichloroethane	<0.2	<0.2	0.2
1,1-Dichloroethylene	<0.2	<0.2	0.2
1,2-Dibromoethane	<0.2	<0.2	0.2
Dichlorobenzene ⁽¹⁾	<1.1	<1.1	1.1
Dichloromethane	0.64	0.42	0.1
1,2-Dichloroethane	<0.2	<0.2	0.2
1,1,1-Trichloroethane	<0.1	<0.1	0.1
Perchloroethene	0.11	0.10	0.1
Toluene	2.58	2.33	0.1
Total Xylenes*	1.52	1.35	0.3
Trichloroethene	<0.1	<0.1	0.1
Vinyl Chloride	<0.2	<0.2	0.2
SCAQMD Rule 1150.1 Components Analysis in Ambient Air Tedlar Bag Samples			
Compound	Sample Ambient Air AA-3 Results (ppbV)	Sample Ambient Air AA-4 Results (ppbV)	Reporting Limit (ppbV)
Methane	6.27	2.22	1
Total Non-Methane Organics (as methane)	2.06	2.19	1

7 FIELD INSTRUMENTATION AND EQUIPMENT SPECIFICATIONS

7.1 Meteorological Station

A Climatronics portable meteorological station is used for measuring wind speed and direction during instantaneous and integrated surface sampling, and ambient air monitoring. This monitor collects continuous wind data during all monitoring events. The wind system consists of a Climatronics monitor, equipped with F460 wind sensors with threshold speeds of 0.50 miles per hour and a portable dual channel recording strip chart.

A continuous recorder and battery is housed in a portable steel case to prevent damage to the system. The continuous recorder averages wind speed and direction measurements in 15-minute increments. Measurements are recorded on a strip chart. The date, time, and wind speed and direction measurements are recorded daily after each instantaneous or integrated sampling session is completed.

A supervisor monitored the wind speed during instantaneous and integrated sampling sessions so that technicians are continuously aware of the wind speed when walking traverses or grid patterns.

7.2 Organic Vapor Analyzer

A portable Organic Vapor Analyzer (OVA) manufactured by Foxboro was used for monitoring the surface emission concentration of total organic compounds (TOCs) during instantaneous monitoring, and for measuring TOC concentrations in integrated surface samples and perimeter probes (ppm range). The OVA used had the following specifications:

- Range: 0-10,000 ppm (v/v)
- Minimum detectable limit: 5 ppm
- Response time: 15 seconds
- Flame out indicator: audible and visual
- Accuracy: +/-4%
- Precision: +/-3%

- Ambient temperature: 0-50 degrees Celsius

7.3 GEM-500 Gas Extraction Monitor

A GEM-500 Gas Extraction Monitor, manufactured by LANDTEC for use at landfills, was used for monitoring LFG composition. Compounds measured include methane, carbon dioxide, oxygen, and balance gas as nitrogen in percent volume and methane as percent of LEL.

The GEM-500 specifications are as follows:

	Sensor Range Imperial	Resolution Imperial
Methane - CH ₄ :	0-100%	0.1%
Carbon dioxide - CO ₂ :	0-75%	0.1%
Oxygen - O ₂ :	0-100%	0.1%
Pressure (differential):	0-10" w.c.	0.01" w.c.
(static):	0-100" w.c.	0.1" w.c.

GEM-500 typical accuracy:

Concentration	%CH ₄ by Volume	%CO ₂ by Volume	%O ₂ by Volume
5% LEL	+/- 0.3%	N/A	+/- .25%
75%	+/- 1.9%	+/- 3.0%	N/A
100%	+/- 1.95%	N/A	N/A

7.4 GEM-2000 Gas Extraction Monitor

A GEM-2000 Gas Extraction Monitor, manufactured by LANDTEC for use at landfills, was used for monitoring LFG composition. Compounds measured include methane, carbon dioxide, oxygen, and balance gas as nitrogen in percent volume and methane as percent of LEL.

The GEM-2000 specifications are as follows:

	Sensor Range Imperial	Resolution Imperial
Methane - CH ₄ :	0-100%	0.1%
Carbon dioxide - CO ₂ :	0-100%	0.1%
Oxygen - O ₂ :	0-25%	0.1%
Pressure (differential):	0-10" w.c.	0.01" w.c.
(static):	0-100" w.c.	0.1" w.c.

GEM-2000 typical accuracy:

Concentration	%CH₄ by Volume	%CO₂ by Volume	%O₂ by Volume
0-5%	+/- 0.5%	+/- 0.5%	+/- .25%
5-15%	+/- 1%	+/- 1%	N/A
15%-FS	+/- 3%	N/A	N/A

7.5 Integrated Surface Sampler

Each portable Integrated Sampler is comprised of a Tedlar bag, DC pump, and a calibrated flow controller. Each bag sampler is calibrated by a film (bubble meter) calibration method. Each Tedlar bag sample was purged three times with ultra-pure nitrogen before sampling and enclosed in a light-sealed box after sampling. Analyses were performed within 72 hours after sampling was conducted.

7.6 Tedlar Bags

Ten-liter bags, made of Tedlar material, were used to collect integrated samples, and for the collection of the raw gas sample at the main gas conveyance line. Each Tedlar bag, prior to use, is filled with nitrogen for a minimum of 24 hours and checked for leaks. Each used Tedlar bag is purged three times with nitrogen and refilled with nitrogen for a minimum of 24 hours and checked for leaks. Each Tedlar bag is numbered for tracking purposes and each number corresponds with the number of the integrated sampling grid.

LIMITATIONS

The services described in this report were performed consistent with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. These services were performed consistent with our agreement with our client. This report is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

Opinions and recommendations contained in this report apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, nor the use of segregated portions of this report.

FIGURES

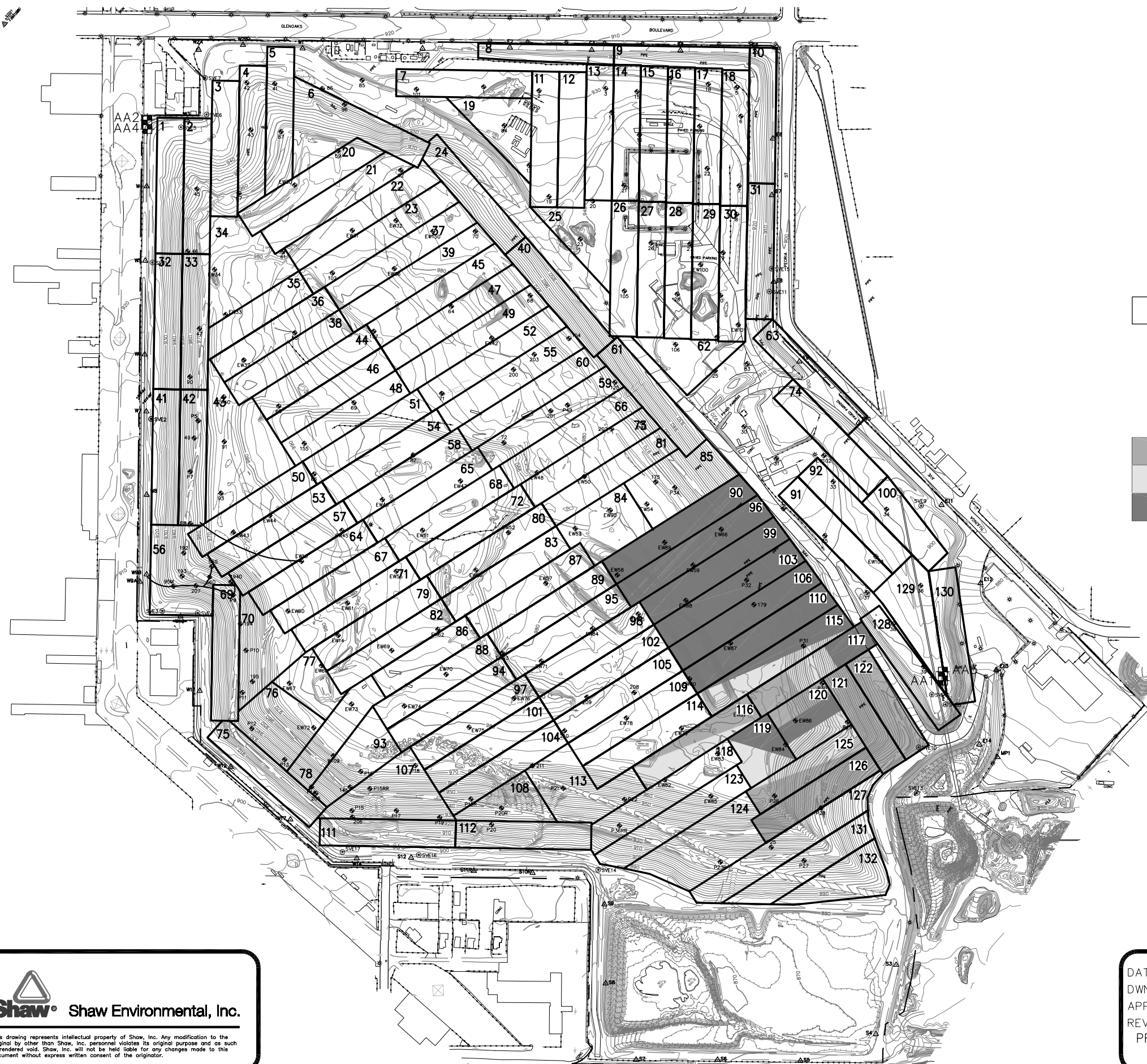
1" 1/2" 0" 1"

File: N:\Cad\Drawings\Waste Management\Landfills\Bradley LF\054Q\1150FIG1.dwg Layout: Layout1 User: jeremy.totten Feb 09, 2006 - 2:32pm



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LEGEND

- 179 VAPOR EXTRACTION WELLS
- PROPERTY BOUNDARY
- 1 SURFACE EMISSIONS MONITORING GRID
- AA1 UP WIND SAMPLER
- AA2 DOWN WIND SAMPLER
- AA3 DOWN WIND SAMPLER
- AA4 UP WIND SAMPLER
- ACTIVE FILL AREA OCTOBER 2005
- ACTIVE FILL AREA NOVEMBER 2005
- ACTIVE FILL AREA DECEMBER 2005

NOTES:

- 1) ALL TOTAL ORGANIC COMPOUND (TOC) CONCENTRATIONS ARE MEASURED IN PARTS PER MILLION (PPM) AS METHANE.
- 2) BACKGROUND TOC READING WAS 5 ppm.
- 3) BRADLEY WEATHER STATION IS LOCATED ATOP THE MAIN OFFICE BUILDING (NOT SHOWN ON MAP) .
- 4) AA = AMBIENT AIR MONITORING STATION.

0 400 800
SCALE IN FEET

DATE 02/09/06
DWN JDT
APP RF
REV
PROJECT NO.
108341

FIGURE 1
WASTE MANAGEMENT OF CALIFORNIA, INC.
BRADLEY LANDFILL AND RECYCLING CENTER
SUN VALLEY, CALIFORNIA
4th QUARTER 2005
SURFACE EMISSIONS MONITORING SITE PLAN

1" 1/2" 0" 1"

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LEGEND

- PROPERTY BOUNDARY
- 0 ppm INTEGRATED SURFACE SAMPLING GRID
- TOTAL ORGANIC COMPOUNDS (TOC) MEASURED AS METHANE USING ORGANIC VAPOR ANALYZER
- AA1 UP WIND SAMPLER
- AA2 DOWN WIND SAMPLER
- AA3 DOWN WIND SAMPLER
- AA4 UP WIND SAMPLER
- READINGS OVER 500 ppm OCTOBER 2005
- ACTIVE AREA, OCTOBER 2005
- GREENWASTE AREAS (NOT MONITORED THIS MONTH)

NOTES:

- 1) ALL TOTAL ORGANIC COMPOUND (TOC) CONCENTRATIONS ARE MEASURED IN PARTS PER MILLION (PPM) AS METHANE.
- 2) BACKGROUND TOC READING WAS 5 ppm.
- 3) BRADLEY WEATHER STATION IS LOCATED ATOP THE MAIN OFFICE BUILDING (NOT SHOWN ON MAP) .
- 4) AA = AMBIENT AIR MONITORING STATION.
- 5) GRID 60 NOT MONITORED THIS MONTH DUE TO DRILLING.

0 400 800
SCALE IN FEET

DATE 02/09/06
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108341

FIGURE 2A
WASTE MANAGEMENT OF CALIFORNIA, INC.
BRADLEY LANDFILL AND RECYCLING CENTER
SUN VALLEY, CALIFORNIA
OCTOBER 2005 - 4TH QUARTER 2005
INSTANTANEOUS SURFACE EMISSIONS RESULTS

1" 1/2" 0" 1" File: N:\Cad\Drawings\Waste Management\Landfills\Bradley LF\054Q\1150-11.dwg Layout: Layout1 User: jeremy.totten Feb 09, 2006 - 3:14pm



LEGEND

- PROPERTY BOUNDARY
- 0 ppm INTEGRATED SURFACE SAMPLING GRID
- TOTAL ORGANIC COMPOUNDS (TOC) MEASURED AS METHANE USING ORGANIC VAPOR ANALYZER
- AA1 UP WIND SAMPLER
- AA2 DOWN WIND SAMPLER
- AA3 DOWN WIND SAMPLER
- AA4 UP WIND SAMPLER
- READINGS OVER 500 ppm NOVEMBER 2005
- ACTIVE AREA, NOVEMBER 2005
- GREENWASTE AREAS (NOT MONITORED THIS MONTH)

NOTES:

- 1) ALL TOTAL ORGANIC COMPOUND (TOC) CONCENTRATIONS ARE MEASURED IN PARTS PER MILLION (PPM) AS METHANE.
- 2) BACKGROUND TOC READING WAS 5 ppm.
- 3) BRADLEY WEATHER STATION IS LOCATED ATOP THE MAIN OFFICE BUILDING (NOT SHOWN ON MAP) .
- 4) AA = AMBIENT AIR MONITORING STATION.



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PROJECT NO. 108341

FIGURE 2B
WASTE MANAGEMENT OF CALIFORNIA, INC.
BRADLEY LANDFILL AND RECYCLING CENTER
SUN VALLEY, CALIFORNIA
NOVEMBER 2005 - 4TH QUARTER 2005
INSTANTANEOUS SURFACE EMISSIONS RESULTS

1" 1/2" 0" 1" File: N:\Cad\Drawings\Waste Management\Landfills\Bradley LF\054Q\1150-12.dwg Layout: Layout1 User: jeremy.totten Feb 09, 2006 - 2:36pm



LEGEND

- PROPERTY BOUNDARY
- 0 ppm INTEGRATED SURFACE SAMPLING GRID
- TOTAL ORGANIC COMPOUNDS (TOC) MEASURED AS METHANE USING ORGANIC VAPOR ANALYZER
- AA1 UP WIND SAMPLER
- AA2 DOWN WIND SAMPLER
- AA3 DOWN WIND SAMPLER
- AA4 UP WIND SAMPLER
- READINGS OVER 500 ppm DECEMBER 2005
- ACTIVE AREA, DECEMBER 2005

NOTES:

- 1) ALL TOTAL ORGANIC COMPOUND (TOC) CONCENTRATIONS ARE MEASURED IN PARTS PER MILLION (PPM) AS METHANE.
- 2) BACKGROUND TOC READING WAS 5 ppm.
- 3) BRADLEY WEATHER STATION IS LOCATED ATOP THE MAIN OFFICE BUILDING (NOT SHOWN ON MAP) .
- 4) AA = AMBIENT AIR MONITORING STATION.



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DATE 02/09/06
DWN JDT
APP RF
REV
PROJECT NO. 108341

FIGURE 2C
WASTE MANAGEMENT OF CALIFORNIA, INC.
BRADLEY LANDFILL AND RECYCLING CENTER
SUN VALLEY, CALIFORNIA
DECEMBER 2005 - 4TH QUARTER 2005
INSTANTANEOUS SURFACE EMISSIONS RESULTS



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LEGEND

- PROPERTY BOUNDARY
- 5 ppm INTEGRATED SURFACE SAMPLING GRID
- TOTAL ORGANIC COMPOUNDS (TOC) MEASURED AS METHANE USING ORGANIC VAPOR ANALYZER
- AA1 UP WIND SAMPLER
- AA2 DOWN WIND SAMPLER
- AA3 DOWN WIND SAMPLER
- AA4 UP WIND SAMPLER
- ACTIVE AREA

NOTES:

- 1) ALL TOTAL ORGANIC COMPOUND (TOC) CONCENTRATIONS ARE MEASURED IN PARTS PER MILLION (PPM) AS METHANE.
- 2) BACKGROUND TOC READING WAS 5 ppm.
- 3) BRADLEY WEATHER STATION IS LOCATED ATOP THE MAIN OFFICE BUILDING (NOT SHOWN ON MAP) .
- 4) AA = AMBIENT AIR MONITORING STATION.
- 5) MAP READINGS ARE CONCENTRATIONS ABOVE BACKGROUND.

0 400 800
SCALE IN FEET

DATE 02/09/06
DWN JDT
APP RF
REV
PROJECT NO.
108341

FIGURE 3
WASTE MANAGEMENT OF CALIFORNIA, INC.
BRADLEY LANDFILL AND RECYCLING CENTER
SUN VALLEY, CALIFORNIA
4th QUARTER 2005
INTEGRATED SURFACE EMISSIONS RESULTS

APPENDIX A
ALTERNATIVE RULE 1150.1 COMPLIANCE PLAN



South Coast Air Quality Management District

21865 E. Copley Drive, Diamond Bar, CA 91765-4182
(909) 396-2000 • www.aqmd.gov

June 19, 2002

WASTE MANAGEMENT DISPOSAL SVCS OF CAL
9081 TUJUNGA AVE
SUN VALLEY, CA 91352

Attention: SCOTT PIGNAC

RULE 1150.1 COMPLIANCE PLAN

Reference is made to your Application for a Rule 1150.1 Compliance Plan for the following landfill.

Facility ID:	50310	Sector:	PC
Application No:	394147	Phone No:	(818) 767-6180
Common Name:	Bradley Landfill		
Location Address:	9227 TUJUNGA AVE		
City:	SUN VALLEY	, CA	91352-1542

South Coast Air Quality Management District (AQMD) has reviewed your application and approved the alternatives as described in the inserts to the attached Rule 1150.1 requirements for your landfill. Rule 1150.1 Compliance Plans may be submitted by each owner or operator responsible for that section of the rule directly under their control, or by the owner or operator responsible for the entire landfill. Compliance under the alternative provision is achieved if only one owner or operator with responsibility submits a compliance plan for the applicable section of the rule. Only one alternative to each rule requirement shall be allowed for multiple Compliance Plans issued to one landfill, and that alternative shall be written into each Compliance Plan for that landfill. The AQMD reserves the right to deny any or all of these alternatives if it is determined that the alternative(s) allow emissions from the landfill that would not have occurred if the owner or operator were complying with the rule requirements. **This Compliance Plan supercedes all previous plans issued to you for this site. The Municipal Solid Waste (MSW) landfill owner or operator shall comply with this approved Compliance Plan no later than October 1, 2002.**

Where no Rule 1150.1 alternatives are specified, compliance with provisions of Rule 1150.1 is required. You are further advised that other governmental agencies may require approval for the operation of this landfill and it is the responsibility of the applicant to obtain approval from each agency. This compliance plan will remain in force until either a new plan is filed and approved or the applicant is notified by the Executive Officer of revisions to this plan. The AQMD shall not be responsible or liable for any losses resulting from measures required or taken pursuant to the requirements of this approved Rule 1150.1 Compliance Plan.

June 19, 2002

If you have any questions regarding this matter, please phone Ted Kowalczyk, Air Quality Engineer at (909) 396-2592.

Sincerely,



Jay Chen, P.E.

Senior A.Q. Engineering Manager

cc: Larry Israel
Air Quality Inspector
Revision Number: 3

Alternative Compliance Plan For Bradley Landfill, Issue No. 3

**RULE 1150.1. CONTROL OF GASEOUS EMISSIONS FROM MUNICIPAL
SOLID WASTE LANDFILLS (Amended March 17, 2000)**

TABLE OF CONTENTS

- (a) Purpose
- (b) Applicability
- (c) Definitions
- (d) Active Landfill Design and Operation Requirements
- (e) Active Landfill Sampling and Monitoring Requirements
- (f) Active Landfill Recordkeeping and Reporting Requirements
- (g) Active Landfill Compliance Schedule
- (h) Inactive Landfill Requirements
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- (j) Test Methods
- (k) Exemptions
- (l) Loss of Exemption

Attachment A

- 1.0 Subsurface Refuse Boundary Sampling Probes
- 2.0 Integrated Landfill Surface Sampling
- 3.0 Instantaneous Landfill Surface Monitoring
- 4.0 Landfill Gas Sample From Gas Collection System
- 5.0 Ambient Air Samples At The Landfill Property Boundary
- Figure 1 Portable Integrated Bag Sampler
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Attachment B
Attachment C

The reference numbers in the left hand margin of the rule refer to sections of
40 CFR, Part 60, Subpart WWW (NSPS)

(a) Purpose

The rule is intended to limit Municipal Solid Waste (MSW) landfill emissions to prevent public nuisance and possible detriment to public health caused by exposure to such emissions.

(b) Applicability

This rule applies to each active and inactive MSW landfill.

(c) Definitions

Terms used but not defined in this rule have the meaning given them in 40 CFR, Part 60, Section 60.751 (Definitions):

- (1) ADMINISTRATOR means the Executive Officer of the South Coast Air Quality Management District (District).
- (2) ACTIVE LANDFILL means an MSW landfill that has received waste on or after November 8, 1987.
- (3) BACKGROUND means the local ambient concentration of total organic compounds (TOC) measured as methane determined by holding the instrument probe approximately 5 to 6 feet above the landfill surface.
- (4) CLOSED LANDFILL means a disposal facility that has ceased accepting waste and was closed in accordance with all applicable federal, state and local statutes, regulations, and ordinances in effect at the time of closure.
- (5) INACTIVE LANDFILL means an MSW landfill where solid waste had been disposed of before November 8, 1987 and no more subsequent solid waste disposal activity has been conducted within the disposal facility.
- (6) MSW LANDFILL means an entire disposal facility in a contiguous geographical space where solid waste is placed in or on land. An MSW landfill may be either active or inactive.
- (7) OPERATOR means the person:
 - (A) Operating the MSW landfill, or
 - (B) Operating the MSW landfill gas collection or control system.
- (8) OWNER means the person holding Title to the property.
- (9) PERIMETER means the outer boundary of the entire waste disposal property.
- (10) PROFESSIONAL ENGINEER means an engineer holding a valid certificate issued by the State of California Board of Registration for

Professional Engineers and Land Surveyors or a state offering reciprocity with California.

- (11) TOXIC AIR CONTAMINANT (TAC) means an air contaminant which has been identified as a hazardous air pollutant pursuant to Section 7412 of Title 42 of the United States Code; or has been identified as a TAC by the Air Resources Board pursuant to Health and Safety Code Section 39655 through 39662, or which may cause or contribute to an increase in mortality or an increase in serious illness, or potential hazard to human health.

(d) Active Landfill Design and Operation Requirements

The MSW landfill owner or operator shall comply with the provisions of paragraphs (d)(1) through (d)(11):

- (1) If a valid Permit to Construct or Permit to Operate for the collection and control system that meets the requirements of subparagraphs (d)(1)(A) through (d)(1)(C) has not been issued by the District by the adoption date of this rule, submit a site-specific collection and control system design plan. The design plan shall be prepared by a Professional Engineer and sent to the Executive Officer with applications for Permits to Construct or Permits to Operate no later than one year after the adoption of this rule. The Executive Officer shall review the collection and control system design and either approve it, disapprove it, or request that additional information be submitted.

752(b)(2)(i)
752(b)(2)(i)(D)

- (A) The collection and control system shall be designed to handle the maximum expected gas flow rate from the entire area of the landfill that requires control, to minimize migration of subsurface gas to comply with paragraph (d)(4), and to collect gas at an extraction rate to comply with paragraphs (d)(5) and (d)(6). For the purposes of calculating the maximum expected gas generation flow rate from the landfill, one of the equations in 40 CFR, Part 60, Section 60.755(a)(1) shall be used. Another method may be used to determine the maximum gas generation flow rate, if the method has been approved by the Executive Officer.

752(b)(2)(i)(A)(1), (3), (4)
755(a)(1)
758(b)(1)(i)

- (B) If a valid Permit to Construct or Permit to Operate has not been issued by the District for the collection and control system, the collection and control system design plan shall either conform with

752(b)(2)(i)(C)
756(e)

(Amended March 17, 2000)

specifications for active collection systems in 40 CFR, Part 60, Section 60.759 or include a demonstration to the Executive Officer's satisfaction of the sufficiency of the alternative provisions describing the design and operation of the collection system, the operating parameters that would indicate proper performance, and appropriate monitoring procedures. Alternatives to this rule shall be submitted as specified in subdivision (i).

- (C) The design plan shall provide for the control of collected MSW landfill emissions through the use of a collection and control system meeting the applicable requirements in clauses (d)(1)(C)(i) and (d)(1)(C)(ii):

752(b)(2)(iii)

- (i) Route all the collected gas to a control system designed and operated to either reduce NMOC by at least 98 percent by weight or reduce the outlet NMOC concentration to less than 20 parts per million by volume (ppmv), dry basis as hexane at 3 percent oxygen. The required reduction efficiency or ppmv shall be established by an initial source test, required under 40 CFR, Part 60, Section 60.8 and annually thereafter using the test methods specified in paragraph (j)(1). The annual source test shall be conducted no later than 45 days after the anniversary date of the initial source test.

ALTERNATIVE: THE FOLLOWING FREQUENCY SHALL BE USED FOR SOURCE TESTING IDENTICAL FLARES LISTED ON ONE PERMIT TO OPERATE WHERE IDENTICAL MEANS, BUT IS NOT LIMITED TO:

MAKE AND MODEL, BURNERS, OPERATIONAL SETTINGS, MAINTENANCE AND FUELS.

SINGLE BACKUP FLARE- AFTER EVERY 4000 HOURS OF OPERATION.

(Amended March 17, 2000)

MULTIPLE BACKUP FLARES - ONE FLARE AFTER EVERY 4000 HOURS OF CUMULATIVE BACKUP OPERATION FOR ALL FLARES LISTED ON THE PERMIT TO OPERATE. ALTERNATE TESTING OF THE FLARES SUCH THAT EACH FLARE IS TESTED.

NON-BACKUP FLARES: AT LEAST ONE FLARE EVERY YEAR AND THEN ALTERNATE ALL OTHERS SUCH THAT EACH IS SOURCE TESTED AT LEAST ONCE EVERY THREE YEARS.

- (I) If a boiler or process heater is used as the control device, the landfill gas stream shall be introduced into the flame zone. Where the landfill gas is the primary fuel for the boiler or process heater, introduction of the landfill gas stream into the flame zone is not required.
 - (II) The control device shall be operated within the **operating parameter ranges** established during the initial or most recent compliant source test. The operating parameters to be monitored are specified under paragraph (e)(6).
 - (ii) Route the collected gas to a treatment system that processes the collected gas for subsequent sale or use. All emissions from any atmospheric vent from the gas treatment system shall be subject to the requirements of clause (d)(1)(C)(i).
 - (2) Install and operate the collection and control system no later than 18 months after the submittal of the design plan.
- 752(b)(2)(ii)**
- (3) If the District has not issued prior written approval for subsurface refuse boundary sampling probes, design and install subsurface refuse boundary sampling probes as specified in Section 1.1, Attachment A, to determine whether landfill gas migration exists. Installation of the refuse boundary probes shall be no later than 18 months after the submittal of the collection and control design plan as specified in paragraph (d)(1).

(Amended March 17, 2000)

ALTERNATIVE: THE SUBSURFACE REFUSE BOUNDARY PROBES APPROVED IN THE PAST OR SUBMITTED WITH THIS APPLICATION, ARE APPROVED. ALL FUTURE DESIGNS AND INSTALLATIONS NOT MEETING THE RULE REQUIREMENTS, SHALL BE SUBMITTED FOR AQMD PRE-CONSTRUCTION APPROVAL WITH A COMPLIANCE PLAN APPLICATION.

- (4) Operate the collection system to prevent the concentration of TOC measured as methane from exceeding five percent by volume in the subsurface refuse boundary sampling probes constructed for the purposes of detecting lateral migration of landfill gas away from the waste mass, as determined from collected samples.

ALTERNATIVE: EXCEPT PROBE E-8-D (AS IDENTIFIED ON "FIGURE 1. SITE PLAN OF BRADELY EAST LANDFILL IN VICINITY OF PROBE E-8" - 12/5/01).

- (5) Operate the collection system to prevent the concentration of TOC measured as methane from exceeding 50 ppmv as determined by integrated samples taken on numbered 50,000 square foot landfill grids.

- (6) Operate the collection system to prevent the concentration of TOC measured as methane from exceeding 500 ppmv above background as determined by instantaneous monitoring at any location on the landfill, except at the outlet of any control device.

- (7) Operate the control or treatment system at all times when the collected gas is routed to the system. In the event the collection, treatment or control system is inoperable, the gas conveying system shall be shut down and all valves in the collection, treatment and control system contributing to venting of the gas to the atmosphere shall be closed no later than one hour after such breakdown or no later than one hour after the time the owner or operator knew or reasonably should have known of its occurrence.

- (8) Operate the collection, treatment and control system until all the exemption criteria under subdivision (k) has been met and the reports specified in subparagraph (f)(2)(D) have been submitted to the Executive Officer.

- (9) Design, install and operate a wind speed and direction monitoring system with a continuous recorder of the requirements in subparagraphs (d)(9)(A)

(Amended March 17, 2000)

and (d)(9)(B), at a site which is representative of the wind speed and direction in the areas being sampled. The wind velocity shall be recorded throughout the sampling period. The wind direction transmitter shall be oriented to true north using a compass. The monitor shall be installed according to the criteria set forth in 40 CFR, Part 50.

- (A) For wind speed use a 3 cup assembly, with a range of 0 to 50 miles per hour, with a threshold of 0.75 mile per hour or less.
 - (B) For wind direction use a vane, with a range of 0 to 540 degrees azimuth, with a threshold of plus-minus 2 degrees.
- (10) Comply with the requirements of Section 21140 – Final Cover, of California Code of Regulations Title 27, Subchapter 5 – Closure and Post-Closure Maintenance, upon closure of a MSW landfill unit, incorporated herein as Attachment B.
 - (11) Comply with the requirement of Section 20200 – State Water Resources Conservation Board (SWRCB) Applicability and Classification Criteria of California Code of Regulations Title 27, Article 2 – SWRCB, Waste Classification and Management, with respect to the disposal of liquids and semi-solid waste at Class III landfills, incorporated herein as Attachment C.

(e) **Active Landfill Sampling and Monitoring Requirements**

The MSW landfill owner or operator shall comply with the provisions of paragraphs (e)(1) through (e)(6), after installation of the landfill gas control system:

- (1) Monitor and collect samples for analysis as specified in Section 1.0, Attachment A, to determine the concentrations of TOC and TAC each month from the subsurface refuse boundary sampling probes, to assure continued compliance. Any measurement of 5 percent TOC by volume or greater shall be recorded as an exceedance and the actions specified in subparagraphs (e)(1)(A) through (e)(1)(C) shall be taken.

ALTERNATIVE: PROBE E-8-D* ONLY, IN LIEU OF COMPLYING WITH PARAGRAPH (d)(4), OR (e)(1)(A-C) WITH RESPECT TO EXCEEDANCES, MONITOR INSTANTANEOUSLY GRID 31 D* PURSUANT TO SECTION 3.0, ATTACHMENT A. THE OPERATOR SHALL RECORD, MAINTAIN AND REPORT THE RESULTS OF THIS MONITORING PURSUANT TO

(Amended March 17, 2000)

**SUBDIVISION (f). *IDENTIFIED IN "FIGURE 1, SITE PLAN OF
BRADELY EAST LANDFILL IN VICINITY OF PROBE E-8" -
12/5/01.**

- (A) The probe shall be identified and the location recorded as specified in Section 1.6, Attachment A.
 - (B) Adjustments to the vacuum of adjacent wells to increase the gas collection in the vicinity of the probe with the exceedance shall be made and the probe resampled no later than 10 calendar days after detecting the exceedance.
 - (C) If the resampling of the probe shows a second exceedance, additional corrective action shall be taken and the probe shall be resampled again no later than 10 calendar days after the second exceedance. If the resampling shows a third exceedance, it is a violation unless the owner or operator determines that a new or replacement gas collection well is needed. The owner or operator must install and operate the new or replacement well no later than 45 days after detecting the third exceedance.
- (2) Collect **monthly integrated** samples for analysis as specified in Section 2.0, Attachment A, to determine the concentrations of **TOC and TAC** from the landfill surface, to assure continued compliance. Any reading of 50 ppmv or greater shall be recorded as an exceedance and the actions specified in subparagraphs (e)(2)(A) through (e)(2)(C) shall be taken.

**ALTERNATIVE: THE LANDFILL SAMPLING GRIDS ARE
DIVIDED INTO THREE TYPES: "A", "B" AND "C".
QUARTERLY FOR TYPE "A" AND "B" GRIDS. ANNUALLY
FOR TYPE "C" GRIDS.**

- (A) The grid shall be identified and the location recorded as specified in Section 2.8, Attachment A.
- (B) Cover maintenance or adjustments to the vacuum of adjacent wells to increase the gas collection in the vicinity of the grid with the exceedance shall be made and the grid resampled no later than 10 calendar days after detecting the exceedance. If measurable precipitation occurs within the 10 calendar days, all resampling and analysis shall comply with Section 2.2.2, Attachment A.

(Amended March 17, 2000)

(C) If the resampling of the grid shows a second exceedance, additional corrective action shall be taken and the grid shall be resampled again no later than 10 calendar days after the second exceedance. If the resampling shows a third exceedance, it is a violation unless the owner or operator determines that a new or replacement gas collection well is needed. The owner or operator must install and operate the new or replacement well no later than 45 days after detecting the third exceedance.

(3) Monitor instantaneously as specified in Section 3.0, Attachment A, to determine the concentration of TOC each calendar quarter, to assure continued compliance. Any reading of 500 ppmv TOC or greater shall be recorded as an exceedance and the actions specified in subparagraphs (e)(3)(A) through (e)(3)(C) shall be taken. Any closed landfill that has no monitored exceedances of the 500 ppmv standard in three consecutive quarterly monitoring periods may monitor annually. Any reading of 500 ppmv TOC or more above background detected during the annual monitoring or compliance inspections shall result in a return to quarterly monitoring for that landfill.

755(c)
756(f)

ALTERNATIVE: THE LANDFILL MONITORING GRIDS ARE DIVIDED INTO THREE TYPES: "A", "B" AND "C".

QUARTERLY FOR TYPE "A" AND "B" GRIDS.

QUARTERLY FOR "C" WELL HEADS, POLES, AND OTHER STRUCTURES PROTRUDING INTO THE REFUSE.

ANNUALLY FOR THE SURFACE OF TYPE "C" GRIDS.

- (A) The location of each monitored exceedance shall be marked on the landfill or identified by using a global positioning system and the location recorded as specified in Section 3.4, Attachment A.
- (B) Cover maintenance or adjustments to the vacuum of adjacent wells to increase the gas collection in the vicinity of each exceedance shall be made and the location shall be remonitored no later than 10 calendar days after detecting the exceedance.

(Amended March 17, 2000)

(C) If the remonitoring of the location shows a second exceedance, additional corrective action shall be taken and the location shall be remonitored again no later than 10 days after the second exceedance. If the remonitoring shows a third exceedance, it is a violation unless the owner or operator determines that a new or replacement gas collection well is needed. The owner or operator must install and operate the new or replacement well no later than 45 days after detecting the third exceedance.

- (4) Collect a **monthly** landfill gas sample for analysis as specified in Section 4.0, Attachment A, to **determine the concentrations of TOC and TAC** from the main gas collection header line entering the gas treatment and/or gas control systems.

ALTERNATIVE: QUARTERLY

- (5) Collect **monthly** ambient air samples for analysis as specified in Section 5.0, Attachment A, to **determine the concentrations of TOC and TAC** from the landfill property boundary.

ALTERNATIVE: QUARTERLY

- (6) Monitor the collection and control system equipment specified under subparagraphs (e)(6)(A) and (e)(6)(B) in order to comply with subparagraph (d)(1)(C).

(A) For an enclosed combustor install, calibrate, maintain, and operate according to the manufacturer's specifications, the following equipment:

756(b)

(ii) A temperature monitoring device equipped with a continuous recorder and having an accuracy of plus-minus 1 percent of the temperature being measured expressed in degrees Celsius or Fahrenheit. A temperature monitoring device is not required for boilers or process heaters with design heat input capacity greater than 44 megawatts.

(iii) At least one gas flow rate measuring device that shall record the flow to the control device(s) at least every 15 minutes.

(B) For a device other than an enclosed combustor, demonstrate compliance with subparagraph (d)(1)(C) by providing information satisfactory to the Executive Officer describing the operation of the

756(d)

control device, the operating parameters that would indicate proper performance, and appropriate monitoring procedures. Alternatives to this rule shall be submitted as specified in subdivision (i). The Executive Officer may specify additional appropriate monitoring procedures.

(f) Active Landfill Recordkeeping and Reporting Requirements

The MSW landfill owner or operator shall keep all records up-to-date, readily accessible and maintained for at least a period of 5 years and made available to District staff upon request. Records older than 2 years may be maintained off-site, if they are retrievable no later than 4 hours after request.

758(a)

(1) The records required in subparagraphs (f)(1)(A) through (f)(1)(H) shall be maintained at the facility.

758(b)

(A) For the life of the control equipment as measured during the initial source test or compliance determination:

(i) The control device vendor specifications.

(ii) The maximum expected gas generation flow rate as calculated in subparagraph (d)(1)(A).

(iii) When seeking to demonstrate compliance with subparagraph (d)(1)(C) through the use of an enclosed combustion device other than a boiler or process heater with a design heat input capacity greater than 44 megawatts:

(I) The average combustion temperature measured at least every 15 minutes and averaged over the same time period of the source test.

ALTERNATIVE: FOR FLARE(S),
CONTINUOUSLY RECORD THE
INSTANTANEOUS COMBUSTION
TEMPERATURE.

(II) The reduction of NMOC determined as specified in clause (d)(1)(C)(i) achieved by the control device.

(iv) When seeking to demonstrate compliance with subclause (d)(1)(C)(i)(I) through the use of a boiler or process heater of any size: a description of the location at which the collected gas vent stream is introduced into the boiler or

(Amended March 17, 2000)

process heater over the same time period of the source testing.

(B) The data required to be recorded under Section 1.6, Attachment A, for subsurface refuse boundary sampling probes and all remedial actions taken for exceedances of the 5 percent TOC standard required in paragraph (d)(4).

(C) The data required to be recorded under Section 2.8, Attachment A, for integrated samples and all remedial actions taken for exceedances of the 50 ppmv TOC standard required in paragraph (d)(5).

(D) The data required to be recorded under Section 3.4, Attachment A, for instantaneous monitoring and all remedial actions taken for exceedances of the 500 ppmv TOC standard required in paragraph (d)(6).

758(e)

(E) The data required to be recorded under Section 4.5, Attachment A, for landfill gas samples collected from the main gas collection header line entering the gas treatment and/or gas control systems.

(F) The data required to be recorded under Section 5.7, Attachment A, from ambient air collected at the landfill property boundary.

(G) A description and the duration of all periods when the collection, treatment or control device was not operating for a period exceeding one hour and the length of time the system was not operating.

757(f)(3)

(H) Continuous records of the equipment operating parameters specified to be monitored under paragraph (e)(6) as well as records for periods of operation during which the parameter boundaries established during the most recent source test are exceeded.

758(c)

(i) The following constitute exceedances that shall be recorded:

(I) For enclosed combustors except for boilers and process heaters with design heat input capacity of 44 megawatts (150 million British thermal unit per hour) or greater, all 3-hour periods of operation during which the average combustion temperature was more than 28° C (82° F) below the average

(Amended March 17, 2000)

combustion temperature during the most recent source test at which compliance with subparagraph (d)(1)(C) was determined.

ALTERNATIVE: FOR FLARES, ALL 3-HOUR PERIODS OF OPERATION DURING WHICH THE INSTANTANEOUS COMBUSTION TEMPERATURE WAS MORE THAN 28 DEGREES C (82 DEGREES F) BELOW THE AVERAGE COMBUSTION TEMPERATURE DURING THE MOST RECENT SOURCE TEST AT WHICH COMPLIANCE WITH SUBPARAGRAPH (D)(1)(C) WAS DETERMINED.

FOR BOILERS THIS REQUIREMENT IS NOT APPLICABLE.

- (II) For boilers or process heaters, whenever there is a change in the location at which the vent stream is introduced into the flame zone as required under clause (f)(1)(A)(iv).
 - (ii) Records of the indication of flow to the control device specified under paragraph (e)(6)(A)(ii).
 - (iii) Each owner or operator who uses a boiler or process heater with a design heat input capacity of 44 megawatts or greater to comply with subparagraph (d)(1)(C) shall keep records of all periods of operation of the boiler or process heater. (Examples of such records could include records of steam use, fuel use, or monitoring data collected pursuant to other State, local, Tribal, or Federal regulatory requirements.)
- (2) The reports required in subparagraphs (f)(2)(A) through (f)(2)(D) shall be submitted to the Executive Officer (Either paper copy or electronic formats are acceptable).
 - (A) The initial source test report no later than 180 days after start-up and each succeeding complete annual source test report no later

than 45 days after the anniversary date of the initial source test, for all control systems required in subparagraph (d)(1)(C).

(B) A report no later than 45 days after the last day of each calendar quarter with the information required in clauses (f)(2)(B)(i) and (f)(2)(B)(ii).

(i) All exceedances of the emission standards required in paragraphs (d)(4), (d)(5) and (d)(6) in the format required under Sections 1.6, 2.8 and 3.4, Attachment A. All exceedance resampling/remonitoring and each corrective action required under paragraphs (e)(1), (e)(2) and (e)(3). If there are no exceedances, submit a letter stating there were no exceedances for that quarter.

(ii) All TAC analyses required in paragraphs (e)(1) through (e)(5).

(C) A closure report to the Executive Officer no later than 30 days after waste acceptance cessation. The Executive Officer may request additional information as may be necessary to verify that permanent closure has taken place in accordance with the requirements of 40 CFR, Part 258, Section 258.60 or the applicable federal, state and local statutes, regulations, and ordinances in effect at the time of closure. If a closure report has been submitted to the Executive Officer, no additional wastes shall be placed into the landfill without filing a notification of modification as described under 40 CFR, Part 60, Section 60.7(a)(4).

757(d)

(C) A decommissioning report to the Executive Officer 30 days prior to well capping, removal or cessation of operation of the collection, treatment or control equipment. The decommissioning report shall contain all of the items as specified in clauses (f)(2)(D)(i) through (f)(2)(D)(iii):

757(e)

(i) A copy of the closure report submitted in accordance with subparagraph (f)(2)(C).

(ii) A copy of the initial source test report demonstrating that the collection and control system has been installed a minimum of 15 years.

- (iii) All records needed to verify the landfill meets the exemption criteria under subdivision (k).

(g) Active Landfill Compliance Schedule

The MSW landfill owner or operator shall comply with the active landfill requirements of this rule or submit alternatives to this rule as specified in subdivision (i) no later than 90 days after April 10, 1998. Rule 1150.1 Compliance Plans previously submitted to the District shall remain in effect during the 90 days after April 10, 1998, or until the owner or operator has received an approved alternative Rule 1150.1 Compliance Plan submitted as specified in subdivision (i).

(h) Inactive Landfill Requirements

The MSW landfill owner or operator shall comply with either the applicable requirements in paragraphs (h)(1) and (h)(2) or submit alternatives to this rule as specified in subdivision (i).

- (1) Inactive landfills that have a landfill gas collection system shall meet all of the active landfill requirements. For those inactive landfills without a gas collection system and determined to need one, meet all of the active landfill requirements, except the collection and control system design plan and applications for permits shall be submitted no later than one year after notification by the Executive Officer.

(2) Inactive landfills without a gas collection system:

- (A) Upon discovery of TOC measured as methane exceeding 500 ppmv at any location on the landfill surface, apply mitigation measures such as compaction, additional cover, and/or watering to reduce the emissions to less than 500 ppmv. The procedure used for measurement of TOC shall meet the requirements of Section 3.0, Attachment A.

- (B) Submit the following Data and/or meet the required action in paragraph (h)(1):

- (i) At any time after the adoption of this rule, but not later than 30 days after the receipt of a request, submit to the Executive Officer a screening questionnaire pursuant to California Air Resources Board Health and Safety Code (H & S) 41805.5.

determine the efficiency of the control system in reducing NMOC by at least 98 percent by weight. If using Method 18, the minimum list of compounds to be tested shall be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42). The equation in subparagraph (j)(1)(B) shall be used to calculate efficiency.

- (B) U.S. EPA Reference Method 25, 40 CFR, Part 60, Appendix A shall be used to determine the efficiency of the control system in reducing the outlet NMOC concentration to less than 20 ppmv, dry basis as hexane at 3 percent oxygen. Until, but not after District Method 25.3 has met equivalency as specified in paragraph (j)(2), U.S. EPA Reference Method 18, 40 CFR, Part 60, Appendix A may be used for this source test. If using Method 18, the minimum list of compounds to be tested shall be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42). The following equation shall be used to calculate efficiency:

$$\text{Control Efficiency} = (\text{NMOC}_{\text{in}} - \text{NMOC}_{\text{out}}) / (\text{NMOC}_{\text{in}})$$

where,

NMOC_{in} = mass of NMOC entering control device

NMOC_{out} = mass of NMOC exiting control device

(2) Equivalent Test Methods

Any other method demonstrated to be equivalent and approved in writing by the Executive Officers of the District, the California Air Resources Board (CARB), and the Regional Administrator of the United States Environmental Protection Agency (U.S. EPA), Region IX, or their designees, may be used to determine compliance with this rule.

(k) Exemptions

An MSW landfill may be temporarily exempt from all or any portion of the requirements of this rule if the owner or operator can demonstrate to the Executive Officer that the MSW landfill emissions meet the requirements of paragraphs (k)(1) through (k)(4). Temporary exemption may be independently determined by the Executive Officer, if the MSW landfill emissions meet the requirements of paragraphs (k)(1) through (k)(4). MSW landfills issued temporary exemption

letters by the Executive Officer shall remain exempt, subject to periodic review, provided:

- (1) The MSW landfill complies with the requirements of paragraphs (d)(4), (d)(5) and (d)(6).
- (2) The MSW landfill emits less than 55 tons per year of NMOC as specified in 40 CFR, Part 60, Section 60.752(b) or, for a closed landfill, as specified in 40 CFR, Part 60, Section 60.752(b)(2)(v)(C).
- (3) The MSW landfill constitutes an insignificant health risk. In making this determination the Executive Officer shall consider the listed factors in subparagraphs (k)(3)(A) through (k)(3)(G). Where not specified, in evaluating the cancer risks and hazard indexes, the Executive Officer shall be guided by the definitions in District Rule 1401 - New Source Review of Carcinogenic Air Contaminants, and Rule 1402 - Control of Toxic Air Contaminants From Existing Sources.
 - (A) The proximity to, and any adverse impacts on, residences, schools, hospitals or other locations or structures which have children, or elderly or sick persons.
 - (B) The emission migration beyond the landfill property boundary.
 - (C) The complaint history.
 - (D) The age and closure date.
 - (E) The amount and type of waste deposited.
 - (F) That the emissions of carcinogenic air contaminants, specified in Table 1, Attachment A, from the landfill will not result in a maximum individual cancer risk greater than one in one million (1×10^{-6}) at any receptor location.
 - (G) That the emissions of TAC, specified in Table 1, Attachment A, from the landfill will not result in a total acute or chronic Hazard Index of greater than 1.
- (4) The MSW landfill is in compliance with District Nuisance Rule 402.

Such temporary exemption shall be reviewed periodically by the Executive Officer, to consider the land use surrounding the landfill and gaseous emissions, and the impact on the public. Depending upon the results of the review, the Executive Officer may extend or terminate the exemption.

(I) Loss of Exemption

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If an MSW landfill should have its temporary exemption terminated, the owner or operator shall comply with the active landfill requirements of this rule.

ATTACHMENT A

1.0 SUBSURFACE REFUSE BOUNDARY SAMPLING PROBES

Paragraph (d)(4) and (e)(1) Requirements of Rule 1150.1

1.1 Subsurface Probe Design and Installation

Landfills which are subject to Rule 1150.1 must install and maintain a subsurface refuse boundary probe sampling system of adequate design to determine if gas migration exists for the ultimate purpose of preventing surface emissions. The California Integrated Waste Management Board also requires the installation of refuse boundary probes for purposes of detecting and ultimately preventing subsurface migration of landfill gas past the permitted property boundary of the landfill/disposal site as well as the prevention of the accumulation of landfill gas in on-site structures. It is the District's intent that the subsurface refuse boundary probes required by paragraph (d)(3) of Rule 1150.1 be designed and installed in such a manner as to comply with the requirements of the California Integrated Waste Management Board (whenever possible) and Sections 1.1.1 through 1.1.4.

1.1.1 The probes shall be installed within the landfill property line and outside the refuse disposal area.

1.1.2 Wherever accessible, the probes shall be located no further than 100 feet from the refuse boundary.

ALTERNATIVE: WHEREVER ACCESSIBLE AND THE PROBES ARE GREATER THAN 100 FEET FROM THE REFUSE, MONITOR INSTANTANEOUSLY FROM THE REFUSE BOUNDARY TO THE PROBE, USING THE GRID METHOD EVERY QUARTER AND WHEN PROBES EXCEED 2% TOC.

1.1.3 The spacing between probes shall be based on the adjacent land use no further than 1320 feet (1/4 mile) from the refuse boundary and shall be determined as follows:

LAND USE	SPACING
Residential/Commercial	100 feet
Public Access	500 feet
Undeveloped Open Space, (No Public Access)	650 feet
Landfill with Liners	1000 feet

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(Attachment A Continued)

1.1.4 Each probe shall be capped, sealed, have a sampling valve and be of multiple-depth design for which the depth shall be determined based on the depth of refuse no further than 500 feet from the probe as follows:

First Depth	10 feet below surface.
Second Depth	25% of refuse depth or 25 feet below surface, whichever is deeper.
Third Depth	50% of refuse depth or 50 feet below surface, whichever is deeper.
Fourth Depth	75% of refuse depth or 75 feet below surface, whichever is deeper.

Second, third, or fourth depth probes may be deleted if the required depth of such probe is deeper than the depth of the refuse.

1.2 Number of Samples

All refuse boundary gas probes at each depth shall be monitored monthly for TOC measured as methane using a portable flame ionization detector (FID) meeting the requirements of Section 3.2 and with a tube connected to the probe sampling valve. In addition, samples shall be taken as specified in Section 1.2.1 or 1.2.2 to determine the concentration of both TOC and TAC. The Executive Officer may require additional probes to be sampled upon written request.

1.2.1 If the TOC concentration measured with the FID does not exceed 5% by volume in any of the probes, collect one bag sample from one probe with the highest concentration, or

1.2.2 If the TOC concentration measured with the FID for any of the probes exceeds 5% by volume, collect one bag sample per probe from the probes with the highest concentrations above 5% by volume, from at least five probes.

1.3 Subsurface Refuse Boundary Probe Sampling Procedure

1.3.1 Prior to collecting gas samples, evacuate the probe (the probes must be sealed during evacuation) until the TOC concentration remains constant for at least 30 seconds.

1.3.2 The constant TOC concentration shall be measured using an FID that meets the requirements in Section 3.2.

ALTERNATIVE: PORTABLE ANALYZERS ON AN APPROVED LIST OF EQUIPMENT MAINTAINED BY THE AQMD MAY BE

**USED AS ALTERNATIVES FOR THE SAMPLER/INSTRUMENT
REQUIREMENTS OF THIS RULE.**

- 1.3.3 Collect approximately a 10-liter gas sample in a Tedlar (Dupont trade name for polyvinyl) bag or equivalent container over a continuous ten-minute period using the evacuated container sampling procedure described in Section 7.1.1 of EPA Method 18 or direct pump sampling procedure described in Section 7.1.2 of EPA Method 18. The container shall be **LIGHT-SEALED**.
- 1.4 **Subsurface Refuse Boundary Probe Analytical Procedures**
All samples collected shall be analyzed no later than 72 hours after collection for TOC using U.S. EPA Method 25, 40 CFR, Part 60, Appendix A analysis or a portable FID that meets the requirements in Section 3.2 and for the TAC specified in Table 1 and upon written request, Table II, using U.S. EPA Compendium Method TO-14.
- 1.5 **Chain of Custody (Required for samples sent to the lab)**
A custody sheet shall accompany the bag samples. Each time a bag changes hands, it shall be logged on the custody sheet with the time of custody transfer recorded. Laboratory personnel shall record the condition of the sample (full, three-fourths full, one-half full, one-fourth full, or empty). An example of a custody sheet is shown in Figure 4.
- 1.6 **Recording the Results**
 - 1.6.1 Record the volume concentration of TOC measured as methane for each individually identified refuse boundary probe (at each depth) and the volume concentration of TAC for selected probes on a quality control sheet as shown in Figure 3. Include a topographic map drawn to scale with the location of both the refuse boundary probes and the gas collection system clearly marked and identified.
 - 1.6.2 Maintain and submit the results as specified in subdivision (f) of Rule 1150.1.
- 2.0 **INTEGRATED LANDFILL SURFACE SAMPLING**
Paragraph (d)(5) and (e)(2) Requirements of Rule 1150.1
- 2.1 **Number of Samples**

The number of samples collected will depend on the area of the landfill surface. The entire landfill disposal area shall be divided into individually identified 50,000 square foot grids. One monthly sample shall be collected from each grid for analysis. Any area that the Executive Officer deems inaccessible or dangerous for a technician to enter may be excluded from the sampling grids monitored by the landfill owner or operator. To exclude an area from monitoring, the landfill owner or operator shall file a written request with the Executive Officer. Such a request shall include an explanation of the requested exclusion and photographs of the area. The Executive Officer shall notify the landfill owner or operator in writing of the decision. Any exclusion granted shall apply only to the monitoring requirement. The 50 ppmv limit specified in paragraph (d)(5) of Rule 1150.1 applies to all areas.

ALTERNATIVE: SAMPLING IS NOT REQUIRED FOR THE FOLLOWING LANDFILL SURFACES: PORTIONS OF SLOPES 30 DEGREES AND GREATER, PAVED SURFACES EXCEPT FOR CRACKS, THE ACTIVE WORKING FACE, THE MAIN HAUL ROAD AND TEMPORARY STOCKPILES FIVE (5) FEET OR MORE IN HEIGHT. A TEMPORARY STOCKPILE DOES NOT INCLUDE A CLOSED LANDFILL FINAL COVER OR CAP.

2.2 Integrated Surface Sampling Conditions

2.2.1. The average wind speed during this sampling procedure shall be five miles per hour or less. Surface sampling shall be terminated when the average wind speed exceeds five miles per hour or the instantaneous wind speed exceeds ten miles per hour. Average wind speed is determined on a 15-minute average.

2.2.2. Surface sampling shall be conducted when the landfill is dry. The landfill is considered dry when there has been no measurable precipitation for the preceding 72 hours prior to sampling. Most major newspapers report the amount of precipitation that has fallen in a 24-hour period throughout the Southern California area. Select the nearest reporting station that represents the landfill location or provide for measurable precipitation collection at the MSW landfill wind monitoring station.

2.3 Integrated Surface Sampler Equipment Description

(Attachment A Continued)

An integrated surface sampler is a portable self-contained unit with its own internal power source. The integrated sampler consists of a stainless steel collection probe, a rotameter, a pump, and a 10-liter Tedlar bag enclosed in a LIGHT-SEALED CONTAINER to prevent photochemical reactions from occurring during sampling and transportation. The physical layout of the sampler is shown in Figure 1.

An alternate integrated surface sampler may be used, provided that the landfill owner or operator can show an equivalency with the sampler specifications in Section 2.4 and shown in Figure 1. All alternatives shall be submitted as specified in subdivision (i) of Rule 1150.1.

ALTERNATIVE: PORTABLE ANALYZERS ON AN APPROVED LIST OF EQUIPMENT MAINTAINED BY THE AQMD MAY BE USED AS ALTERNATIVES FOR THE SAMPLER/INSTRUMENT REQUIREMENTS OF THIS RULE.

2.4 Integrated Surface Sampler Equipment Specifications

2.4.1 Power: Batteries or any other power source.

2.4.2 Pump: The diaphragm shall be made of non-lubricated Viton (Dupont trade name for co-polymer of hexafluoropropylene and vinylidene fluoride) rubber.

2.4.3 Bag: One 10-liter Tedlar bag with a valve. The Tedlar bag shall be contained in a LIGHT-SEALED CONTAINER. The valve shall be leak free and constructed of aluminum, stainless steel, or non-reactive plastic with a Viton or Buna-N (butadiene acrylonitrile co-polymer) o-ring seal.

2.4.4 Rotameter: The rotameter shall be made of borosilicate glass or other non-reactive material and have a flow range of approximately 0-to-1 liter per minute. The scale shall be in milliliters or an equivalent unit. The graduations shall be spaced to facilitate accurate flow readings.

2.4.5 Air Flow Control Orifice: Needle valve in the rotameter.

2.4.6 Funnel: 316 stainless steel.

2.4.7 Fittings, Tubing and Connectors: 316 stainless steel or Teflon.

2.5 Integrated Surface Sampling Procedure

2.5.1 An integrated surface sampler as described in Section 2.4 shall be used to collect a surface sample approximately 8-to-10 liters from each grid.

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- 2.5.2 During sampling, the probe shall be placed 0-to-3 inches above the landfill surface.
- 2.5.3 The sampler shall be set at a flow rate of approximately 333 cubic centimeters per minute
- 2.5.4 Walk through a course of approximately 2,600 linear feet over a continuous 25-minute period. Figure 2 shows a walk pattern for the 50,000 square foot grid.

ALTERNATIVE: THE LANDFILL SAMPLING GRIDS ARE DIVIDED INTO THREE TYPES CONSISTING OF TYPE "A", TYPE "B" AND TYPE "C" AS REFERENCED IN THE MAP SUBMITTED 4/27/00 OR THE MOST RECENT UPDATE, WITH SHEET TITLE "PLAN-INTEGRATED SURFACE EMISSIONS MONITORING GRIDS". THE THREE TYPES OF GRIDS ARE DEFINED AS: TYPE "A" - NO EXCLUSIONS FROM SAMPLING; TYPE "B" - CONTAINING STEEP SLOPES OR STEEP SLOPES AND DENSE VEGETATION ON GRIDS 121, 122, 128, AND 130; AND TYPE "C" - THE AREA OF ACTIVE RECYCLING OPERATIONS. THE TOPOGRAPHIC MAP SHALL BE DRAWN TO SCALE CLEARLY IDENTIFYING TOPOGRAPHICAL FEATURES OF THE LANDFILL WITH CONTOUR LINES. THE LOCATION OF ALL SAMPLING GRIDS AND THE GAS COLLECTION SYSTEM SHALL BE CLEARLY MARKED AND IDENTIFIED. THE SUBMITTED TOPOGRAPHICAL MAP WILL BE FILED IN THE APPLICATION FOLDER AND USED FOR COMPLIANCE. A SMALLER 11" BY 17" TOPOGRAPHICAL MAP IS ATTACHED TO THIS PLAN FOR FIELD REFERENCE. THE TOPOGRAPHICAL MAPS SHALL BE CONFIRMED OR UPDATED ANNUALLY BY THE OWNER/OPERATOR OR AS REQUESTED BY THE EXECUTIVE OFFICER.

SAMPLING OF TYPE "A" SURFACE GRIDS SHALL BE ACCORDING TO THE RULE.

(Attachment A Continued)

SAMPLING OF TYPE "B" SURFACE GRIDS SHALL CONSIST OF SAMPLING THE TOE OF GRIDS 121, 128, AND 130 AND THE TOP OF GRID 122. VACUUM READINGS FROM ALL GAS EXTRACTION WELLS LOCATED ON TYPE "B" GRIDS SHALL BE RECORDED MONTHLY AND INCLUDED IN THE QUARTERLY REPORT. GRIDS 121 AND 122 EACH DEFINED AS A TYPE "B" GRID, SHALL BE REDESIGNATED AS A TYPE "A" GRID WHEN ENOUGH ADDITIONAL REFUSE HAS BEEN PUT IN PLACE.

SAMPLING OF TYPE "C" SURFACE GRIDS SHALL CONSIST OF SAMPLING A COURSE OF APPROXIMATELY 2,600 LINEAR FEET BUT NOT LESS THAN 1900 LINEAR FEET IN EACH GRID FOR A CONTINUOUS 25-MINUTE PERIOD EXCLUDING STOCKPILES, STORED EQUIPMENT AND RECYCLING EQUIPMENT. RULE 1150.1, ATTACHMENT A, FIGURE 2 SHOWS A 50,000 SQUARE FOOT GRID WALK PATTERN THAT WILL BE MODIFIED TO AVOID THE EXCLUSIONS. VACUUM READINGS FROM ALL GAS EXTRACTION WELLS LOCATED ON TYPE "C" ACTIVE RECYCLING GRIDS SHALL BE RECORDED MONTHLY AND INCLUDED IN THE QUARTERLY REPORT.

2.6 Integrated Surface Sample Analytical Procedures

All samples collected shall be analyzed no later than 72 hours after collection for TOC using U.S. EPA Method 25, 40 CFR, Part 60, Appendix A analysis or a portable FID that meets the requirements in Section 3.2. In addition, the samples specified in Section 2.6.1 or 2.6.2 must be analyzed no later than 72 hours after collection for the TAC specified in Table 1 and upon written request, Table II, using U.S. EPA Compendium Method TO-14.

2.6.1 Ten percent of all samples which have a concentration of TOC greater than 50 ppmv as methane, or

2.6.2 Two samples if all samples are 50 ppmv or less of TOC or two samples if there are less than 20 samples above 50 ppmv.

The Executive Officer may require more samples to be tested for TAC if he determines there is a potential nuisance or public health problem.

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(Amended March 17, 2000)

(Attachment A Continued)

2.7 Chain of Custody (Required for samples sent to the lab)

A custody sheet shall accompany the bag samples. Each time a bag changes hands, it shall be logged on the custody sheet with the time of custody transfer recorded. Laboratory personnel shall record the condition of the sample (full, three-fourths full, one-half full, one-fourth full, or empty). An example of a custody sheet is shown in Figure 4.

2.8 Recording the Results

2.8.1 Record the volume concentration of both TOC measured as methane for each grid and the volume concentration for the required TAC on a quality control sheet as shown in Figure 3. Include a topographic map drawn to scale with the location of the grids and the gas collection system clearly marked and identified.

2.8.2 Record the wind speed during the sampling period using the wind speed and direction monitoring system required in paragraph (d)(9) of Rule 1150.1.

2.8.3 Maintain and submit the results as specified in subdivision (f) of Rule 1150.1.

3.0 INSTANTANEOUS LANDFILL SURFACE MONITORING
Subparagraph (d)(6) and (e)(3) Requirements of Rule 1150.1

3.1 Monitoring Area

The entire landfill disposal area shall be monitored once each calendar quarter. Any area of the landfill that the Executive Officer deems as inaccessible or dangerous for a technician to enter may be excluded from the area to be monitored by the landfill owner or operator. To exclude an area from monitoring, the landfill owner or operator shall file a petition with the Executive Officer. Such a request shall include an explanation of why the area should be excluded and photographs of the area. Any excluded area granted shall only apply to the monitoring requirement. The 500 ppmv limit specified in paragraph (d)(6) of Rule 1150.1 applies to all areas.

ALTERNATIVE: MONITORING IS NOT REQUIRED FOR THE FOLLOWING LANDFILL SURFACES: PORTIONS OF SLOPES 30 DEGREES AND GREATER, PAVED SURFACES EXCEPT FOR CRACKS, THE ACTIVE WORKING FACE, THE MAIN HAUL ROAD

(Attachment A Continued)

AND TEMPORARY STOCKPILES FIVE (5) FEET OR MORE IN HEIGHT. A TEMPORARY STOCKPILE DOES NOT INCLUDE A CLOSED LANDFILL FINAL COVER OR CAP.

3.2 Equipment Description and Specifications

A portable FID shall be used to instantaneously measure the concentration of TOC measured as methane at any location on the landfill. The FID shall meet the specifications listed in Sections 3.2.1 through 3.2.4 and shall be kept in good operating condition.

3.2.1 The portable analyzer shall meet the instrument specifications provided in Section 3 of U.S. EPA Method 21, except that:

3.2.1.1 "Methane" shall replace all references to VOC.

3.2.1.2 A response time of 15 seconds or shorter shall be used instead of 30 seconds.

3.2.1.3 A precision of 3% or better shall be used instead of 10%.

In addition the instrument shall meet the specifications in Sections 3.2.1.4 through 3.2.1.6.

3.2.1.4 A minimum detectable limit of 5 ppmv (or lower).

3.2.1.5 A flame-out indicator, audible and visual.

3.2.1.6 Operate at an ambient temperature of 0 - 50°C.

3.2.2 The calibration gas shall be methane, diluted to a nominal concentration of 10,000 ppmv in air for subsurface refuse boundary probe monitoring and sample analysis to comply with paragraph (e)(1) of Rule 1150.1, 50 ppmv in air for integrated sample analyses to comply with paragraph (e)(2) of Rule 1150.1 and 500 ppmv in air for instantaneous monitoring to comply with paragraph (e)(3) of Rule 1150.1.

3.2.3 To meet the performance evaluation requirements in Section 3.1.3 of U.S. EPA Method 21, the instrument evaluation procedures of Section 4.4 of U.S. EPA Method 21 shall be used.

3.2.4 The calibration procedures provided in Section 4.2 of U.S. EPA Method 21 shall be followed at the beginning of each day before commencing a surface monitoring survey.

3.3 Monitoring Procedures

(Attachment A Continued)

- 3.3.1 The owner or operator shall monitor the landfill disposal area for TOC measured as methane using the described portable equipment.
- 3.3.2 The sampling probe shall be placed at a distance of 0-3 inches above any location of the landfill to take the readings.
- 3.3.3 At a minimum, an individually identified 50,000 square foot grid shall be used and a walk pattern as illustrated in Figure 2 shall be implemented including areas where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover.

ALTERNATIVE: THE LANDFILL MONITORING GRIDS ARE DIVIDED INTO THREE TYPES CONSISTING OF TYPE "A", TYPE "B" AND TYPE "C" AS REFERENCED IN THE MAP SUBMITTED 4/27/00 OR THE MOST RECENT UPDATE, WITH SHEET TITLE "PLAN-INTEGRATED SURFACE EMISSIONS MONITORING GRIDS". THE THREE TYPES OF GRIDS ARE DEFINED AS: TYPE "A" - NO EXCLUSIONS FROM SAMPLING; TYPE "B" - CONTAINING STEEP SLOPES OR STEEP SLOPES AND DENSE VEGETATION ON GRIDS 121, 122, 128, AND 130; AND TYPE "C" - THE AREA OF ACTIVE RECYCLING OPERATIONS. THE TOPOGRAPHIC MAP SHALL BE DRAWN TO SCALE CLEARLY IDENTIFYING TOPOGRAPHICAL FEATURES OF THE LANDFILL WITH CONTOUR LINES. THE LOCATION OF ALL MONITORING GRIDS AND THE GAS COLLECTION SYSTEM SHALL BE CLEARLY MARKED AND IDENTIFIED. THE SUBMITTED TOPOGRAPHICAL MAP WILL BE FILED IN THE APPLICATION FOLDER AND USED FOR COMPLIANCE. A SMALLER 11" BY 17" TOPOGRAPHICAL MAP IS ATTACHED TO THIS PLAN FOR FIELD REFERENCE. THE TOPOGRAPHICAL MAPS SHALL BE CONFIRMED OR UPDATED ANNUALLY BY THE OWNER/OPERATOR OR AS REQUESTED BY THE EXECUTIVE OFFICER.

MONITORING OF TYPE "A" SURFACE GRIDS SHALL BE ACCORDING TO THE RULE.

(Attachment A Continued)

MONITORING OF TYPE "B" SURFACE GRIDS SHALL CONSIST OF MONITORING THE TOE OF GRIDS 121, 128, AND 130 AND THE TOP OF GRID 122. VACUUM READINGS FROM ALL GAS EXTRACTION WELLS LOCATED ON TYPE "B" GRIDS SHALL BE RECORDED MONTHLY AND INCLUDED IN THE QUARTERLY REPORT. GRIDS 121 AND 122 EACH DEFINED AS A TYPE "B" GRID, SHALL BE REDESIGNATED AS A TYPE "A" GRID WHEN ENOUGH ADDITIONAL REFUSE HAS BEEN PUT IN PLACE.

MONITORING OF TYPE "C" SURFACE GRIDS SHALL CONSIST OF MONITORING A COURSE OF APPROXIMATELY 2,600 LINEAR FEET BUT NOT LESS THAN 1900 LINEAR FEET IN EACH GRID, EXCLUDING STOCKPILES, STORED EQUIPMENT AND RECYCLING EQUIPMENT. RULE 1150.1, ATTACHMENT A, FIGURE 2 SHOWS A 50,000 SQUARE FOOT GRID WALK PATTERN THAT WILL BE MODIFIED TO AVOID THE EXCLUSIONS. VACUUM READINGS FROM ALL GAS EXTRACTION WELLS LOCATED ON TYPE "C" RECYCLING GRIDS SHALL BE RECORDED MONTHLY AND INCLUDED IN THE QUARTERLY REPORT.

3.4 Recording the Results

3.4.1 Record the location and concentration of TOC measured as methane for any instantaneous reading of 500 ppmv or greater on a topographic map of the landfill, drawn to scale with the location of both the grids and the gas collection system clearly marked and identified.

3.4.2 Maintain and submit the results as specified in subdivision (f) of Rule 1150.1.

4.0 LANDFILL GAS SAMPLE FROM GAS COLLECTION SYSTEM
Subparagraph (e)(4) Requirement of Rule 1150.1

4.1 Number of Samples

Collect one monthly sample of landfill gas for analysis from the main gas collection header line entering the gas treatment and/or gas control system(s).

(Attachment A Continued)

4.2 Sampling Procedure

Collect approximately a 10-liter sample in a Tedlar bag or equivalent container over a continuous ten-minute period.

4.3 Analytical Procedures

Samples collected shall be analyzed no later than 72 hours after collection for TOC using U.S. EPA Method 25, 40 CFR, Part 60, Appendix A analysis and for the TAC specified in Table 1 and upon written request, Table II, using U.S. EPA Compendium Method TO-14.

4.4 Chain of Custody (Required for samples sent to the lab)

A custody sheet shall accompany the bag samples. Each time a bag changes hands, it shall be logged on the custody sheet with the time of custody transfer recorded. Laboratory personnel shall record the condition of the sample (full, three-fourths full, one-half full, one-fourth full, or empty). An example of a custody sheet is shown in Figure 4.

4.5 Recording the Results

4.5.1 Record the volume concentration of both TOC measured as methane and the volume concentration for the required TAC on a quality control sheet as shown in Figure 3. Include a topographic map drawn to scale with the location of the gas collection and control system clearly marked and identified.

4.5.2 Maintain and submit the results as specified in subdivision (f) of Rule 1150.1.

5.0 AMBIENT AIR SAMPLES AT THE LANDFILL PROPERTY BOUNDARY
Subparagraph (e)(5) Requirement of Rule 1150.1

5.1 Number of Samples

Monthly ambient air samples shall be collected for analysis at the landfill property boundary from both an upwind and downwind sampler sited to provide good meteorological exposure to the predominant offshore (drainage land breeze) and onshore (sea breeze) wind flow patterns. The upwind and downwind samples shall be collected simultaneously over two 12 hour periods beginning between 9:00 a.m. and 10:00 a.m., and 9:00 p.m. and 10:00 p.m. on the same day or different days.

5.2 Ambient Air Sampling Conditions

(Attachment A Continued)

Ambient air sampling shall be conducted on days when stable (offshore drainage) and unstable (onshore sea breeze) meteorological conditions are representative for the season. Preferable sampling conditions are characterized by the following meteorological conditions:

5.2.1 Clear cool nights with wind speeds of two miles per hour or less, and

5.2.2 Onshore sea breezes with wind speeds ten miles per hour or less.

No sampling will be conducted if the following adverse meteorological conditions exist:

5.2.3 Rain,

5.2.4 Average wind speeds greater than 15 miles per hour for any 30-minute period, or

5.2.5 Instantaneous wind speeds greater than 25 miles per hour.

Continuously recorded on-site wind speed and direction measurements required in paragraph (d)(9) of Rule 1150.1 will characterize the micrometeorology of the site and serve to verify that the meteorological criteria have been met during sampling.

5.3 Ambient Air Sampler Equipment Description

An ambient air sampling unit consists of a 10-liter Tedlar bag, a DC-operated pump, stainless steel capillary tubing to control the sample rate to the bag, a bypass valve to control the sample flow rate (and minimize back pressure on the pump), a Rotameter for flow indication to aid in setting the flow, a 24-hour clock timer to shut off the sampler at the end of the 24-hour sampling period, and associated tubing and connections (made of stainless steel, Teflon, or borosilicate glass to minimize contamination and reactivity). The physical layout of the sampler is shown in Figure 5.

An alternate ambient air sampler may be used, provided that the landfill owner or operator can show an equivalency with the sampler specifications in Section 5.3 and shown in Figure 5. All alternatives shall be submitted as specified in subdivision (i) of Rule 1150.1.

5.4 Ambient Air Sampler Equipment Specifications

The equipment used when conducting air samples at any landfill property boundary shall meet the following specifications:

5.4.1 Power: one 12V DC marine battery. The marine battery provides 12V DC to the pump and the clock.

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(Amended March 17, 2000)

(Attachment A Continued)

5.4.2 Pump: one 12V DC pump. The diaphragm shall be made of non-lubricated Viton rubber. The maximum pump unloaded flow rate shall be 4.5 liters per minute.

5.4.3 Bag: One 10-liter Tedlar bag with a valve. The Tedlar bag shall be enclosed in a LIGHT-SEALED CONTAINER. The valve is a push-pull type constructed of aluminum and stainless steel, with a Viton or Buna-N (butadiene acrylonitrile co-polymer) o-ring seal.

5.4.4 Rotameter - made of borosilicate glass and has a flow range of 3-to-50 cubic centimeters per minute. The scale is in millimeters (mm) with major graduations (labeled) every 5 mm and minor graduations every 1 mm.

5.4.5 Air flow control orifice: 316 stainless steel capillary tubing.

5.4.6 Bypass valve.

5.4.7 Fittings, tubing, and connectors -- 315 stainless steel or Teflon.

5.4.8 Clock timer with an accuracy of better than 1%.

5.5 Ambient Air Sample Analytical Procedures

Samples collected must be analyzed no later than 72 hours after collection for TOC using U.S. EPA Method 25, 40 CFR, Part 60, Appendix A analysis or a portable FID that meets the requirements in Section 3.2 and for the TAC specified in Table 1 and upon written request, Table II, using U.S. EPA Compendium Method TO-14.

5.6 Chain of Custody (Required for samples sent to the lab)

A custody sheet shall accompany the bag samples. Each time a bag changes hands, it shall be logged on the custody sheet with the time of custody transfer recorded. Laboratory personnel shall record the condition of the sample (full, three-fourths full, one-half full, one-fourth full, or empty). An example of a custody sheet is shown in Figure 4.

5.7 Recording the Results

5.7.1 Record the volume concentration of TOC measured as methane and the volume concentration of TAC for each sample on a quality control sheet as shown in Figure 3. Include a topographic map drawn to scale with the location of both the upwind and downwind samplers and the gas collection and control system clearly marked and identified.

Alternative Compliance Plan For Bradley Landfill, Issue No. 3

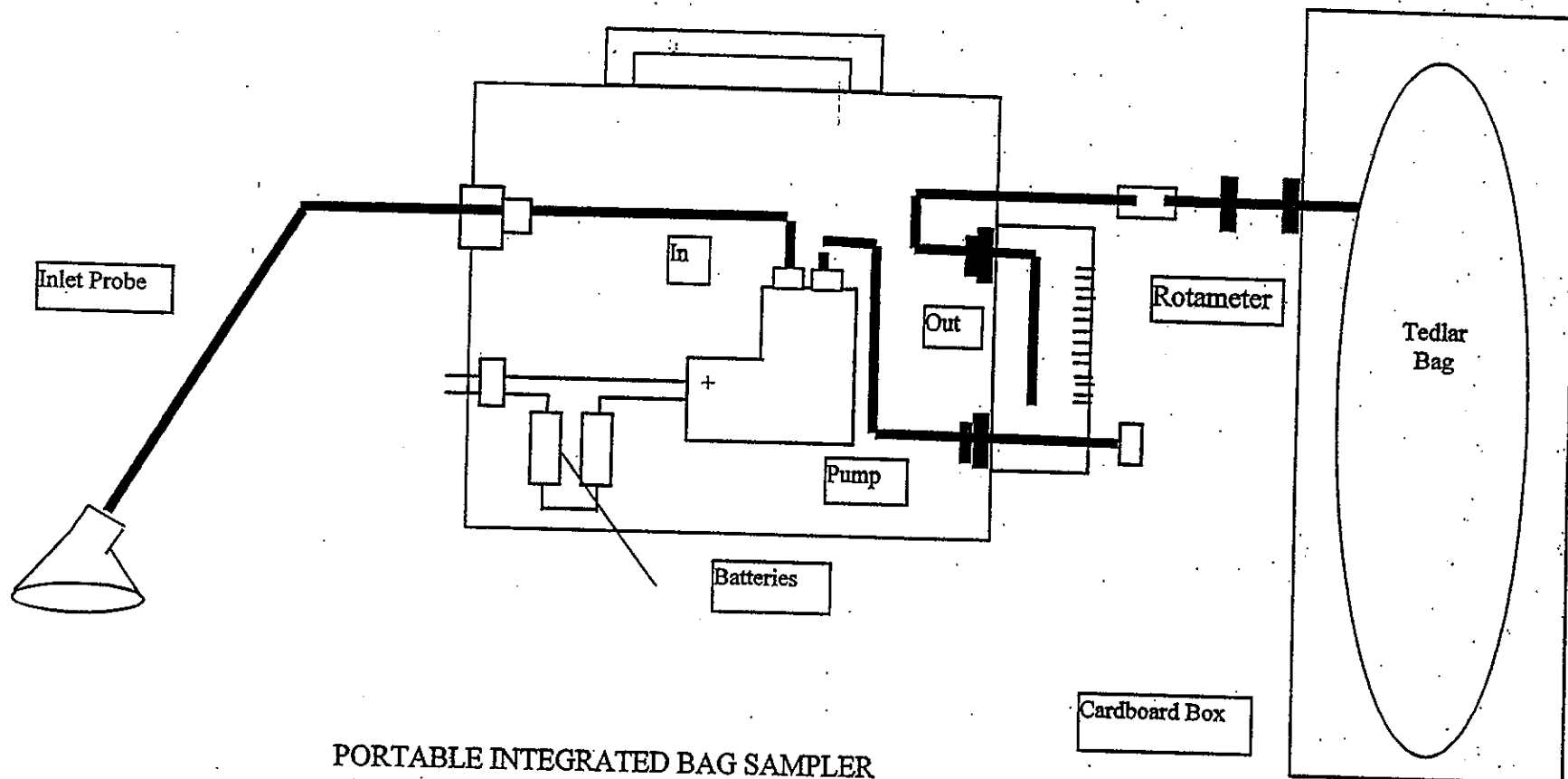
Rule 1150.1 (Cont.)

(Amended March 17, 2000)

(Attachment A Continued)

- 5.7.2 Record the wind speed and direction during the 24-hour sampling period using the wind speed and direction monitoring system required in paragraph (d)(9) of Rule 1150.1.
- 5.7.3 Maintain and submit the results as specified in subdivision (f) of Rule 1150.1.

(Amended March 17, 2000)



PORTABLE INTEGRATED BAG SAMPLER
Physical Layout

Figure 1

Typical Landfill Walk Pattern
for a 50,000 Square Foot Grid

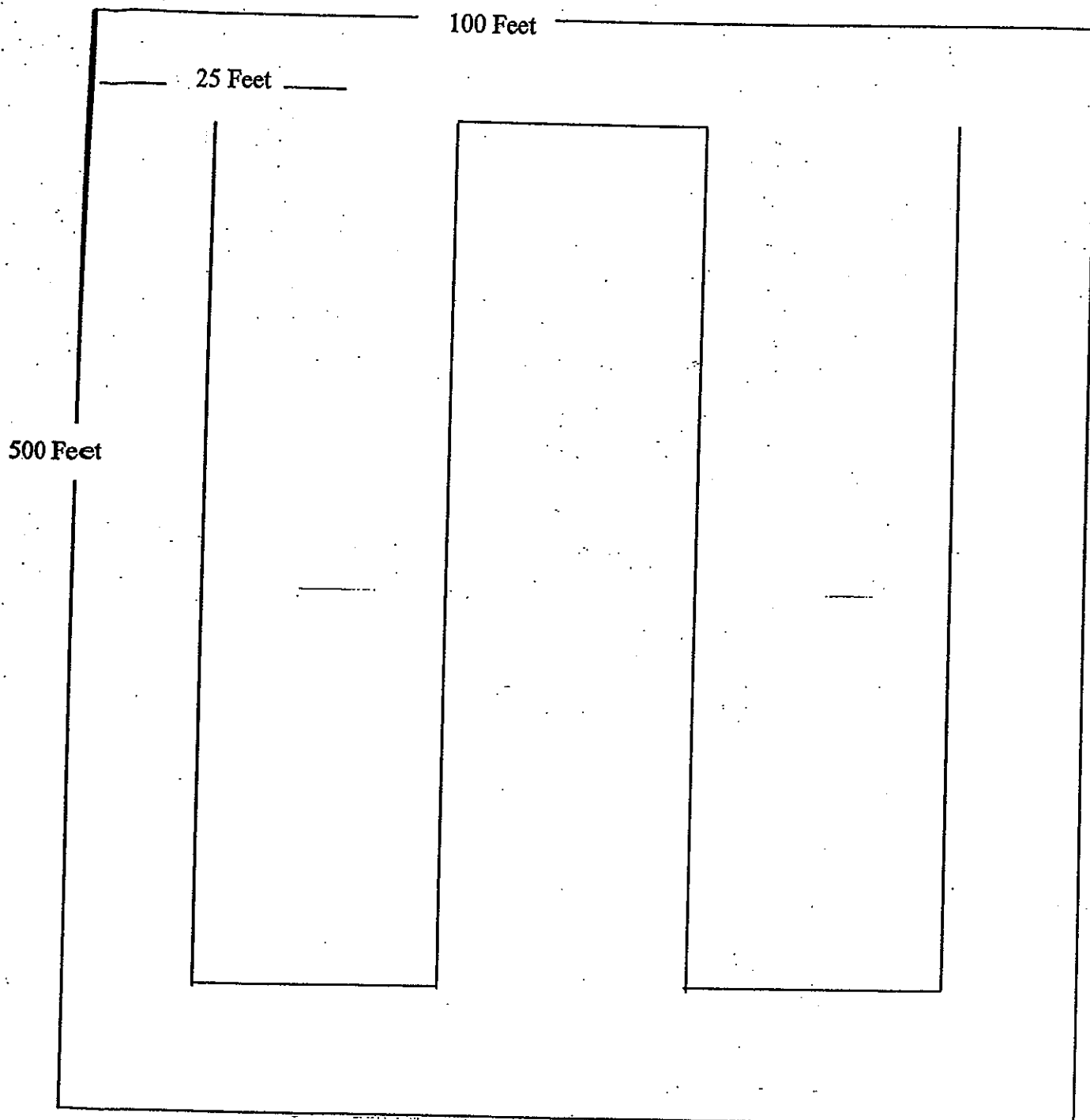


Figure 2

Alternative Compliance Plan For Bradley Landfill, Issue No. 3
 Rule 1150.1 (Cont.)
 (Attachment A Continued)

(Amended March 17, 2000)

BAG SAMPLE CUSTODY FORM

Project _____

Date: _____

Bag (I.D. #)									
Condition Received in Lab*									

Bags Prepared By: _____

Time: _____

Bags Taken Out By: _____

Date: _____

Bags Taken to Lab By: _____

Time: _____

Bags Received In Lab By: _____

Time: _____

* F = 1/2 full to full, O = Overfull (Bulging), L = 1/4 to 1/2 full,
 E = Less than 1/4 full but contains some sample, N = No sample at all.

Figure 4

(Amended March 17, 2000)

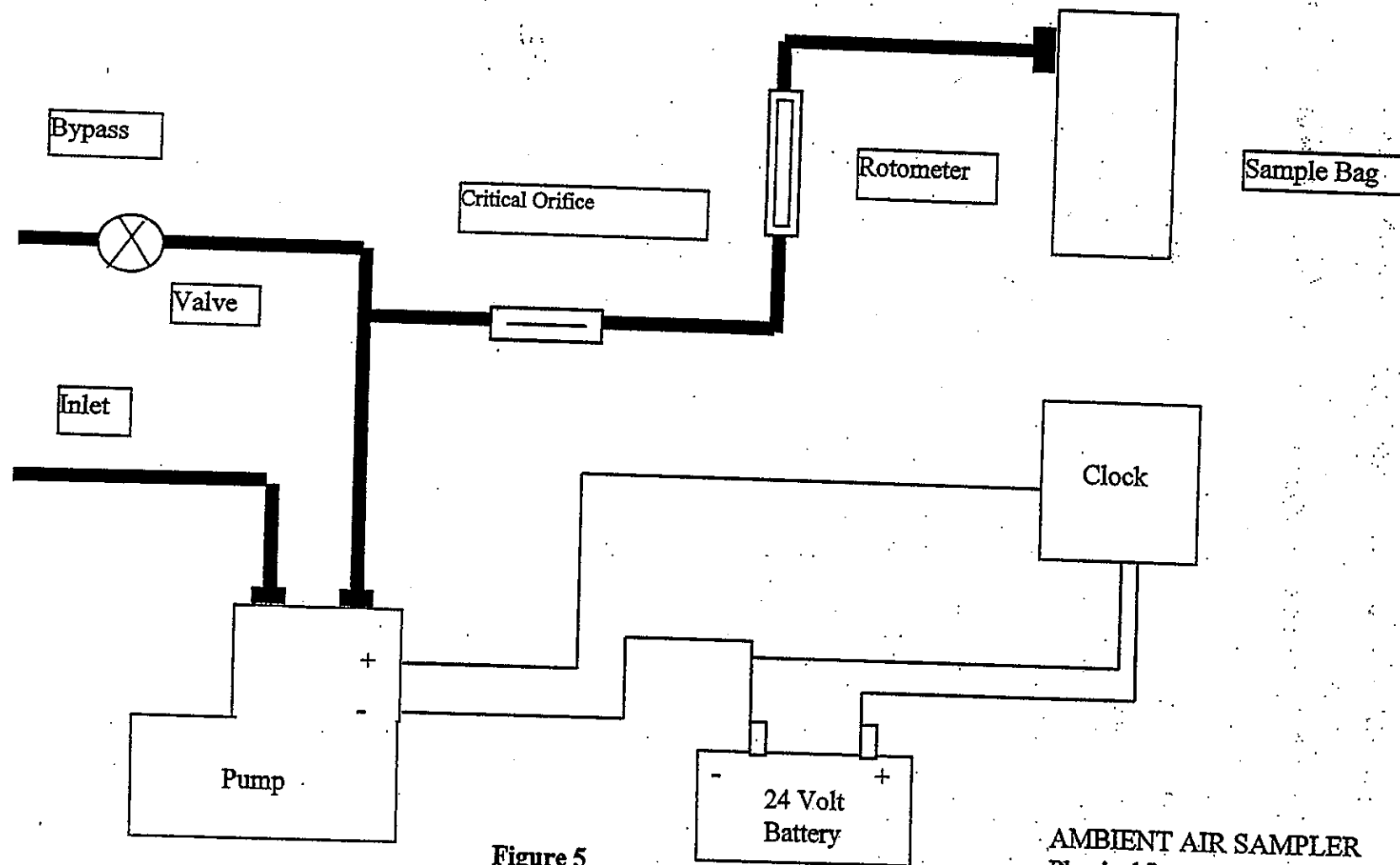


Figure 5.

AMBIENT AIR SAMPLER
Physical Layout

(Amended March 17, 2000)

TABLE 1 - CARCINOGENIC AND TOXIC AIR CONTAMINANTS
(Core Group)

Paragraph (e)(2), Subparagraphs (k)(3)(F) and (k)(3)(G) Requirements of Rule 1150.1

1.	Benzene	C_6H_6
2.	Benzyl Chloride	$C_6H_5H_2Cl$
3.	Chlorobenzene	C_6H_5Cl
4.	1,2 Dibromoethane (Ethylene Dibromide)	$BrCH_2CH_2Br$
5.	Dichlorobenzene	$C_6H_4Cl_2$
6.	1,1 Dichloroethane (Ethylidene Chloride)	CH_3CHCl_2
7.	1,2 Dichloroethane (Ethylene Dichloride)	ClH_2H_2Cl
8.	1,1 Dichloroethene (Vinylidene Chloride)	$CH_2 : CCl_2$
9.	Dichloromethane (Methylene Chloride)	CH_2Cl_2
10.	Hydrogen Sulfide	H_2S
11.	Tetrachloroethylene (Perchloroethylene)	$Cl_2C : CCl_2$
12.	Tetrachloromethane (Carbon Tetrachloride)	CCl_4
13.	Toluene	$C_6H_5CH_3$
14.	1,1,1 Trichloroethane (Methyl Chloroform)	CH_3CCl_3
15.	Trichloroethylene	$CHCl : CCl_2$
16.	Trichloromethane (Chloroform)	$CHCl_3$
17.	Vinyl Chloride	$CH_2 : CHCl$
18.	Xylene	$C_6H_4(CH_3)_2$

(Amended March 17, 2000)

TABLE 2 - CARCINOGENIC AND TOXIC AIR CONTAMINANTS

(Supplemental Group)

Paragraph (e)(2), Subparagraphs (k)(3)(F) and (k)(3)(G) Requirements of Rule 1150.1

1.	Acetaldehyde	CH_3CHO
2.	Acrolein	CH_2CHCHO
3.	Acrylonitrile	$\text{H}_2\text{C} : \text{CHCN}$
4.	Allyl Chloride	$\text{H}_2\text{C} : \text{CHCH}_2\text{Cl}$
5.	Bromomethane (Methyl Bromide)	CH_3Br
6.	Chlorinated Phenols	
7.	Chloroprene	$\text{H}_2\text{C} : \text{CHCCl} : \text{CH}_2$
8.	Cresol	$\text{CH}_3\text{C}_6\text{H}_4\text{OH}$
9.	Dialkyl Nitrosamines	
10.	1,4 - Dioxane	$\text{OCH}_2\text{CH}_2\text{OCH}_2\text{CH}_2$
11.	Epichlorohydrin	$\text{CH}_2\text{OCHCH}_2\text{Cl}$
12.	Ethylene Oxide	$\text{CH}_2\text{CH}_2\text{O}$
13.	Formaldehyde	HCHO
14.	Hexachlorocyclopentadiene	C_5Cl_6
15.	Nitrobenzene	$\text{C}_6\text{H}_5\text{NO}_2$
16.	Phenol	$\text{C}_6\text{H}_5\text{OH}$
17.	Phosgene	COCl_2
18.	Polychlorinated Dibenzo-P-Dioxin	
19.	Polychlorinated Dibenzo Furan	
20.	Polychlorinated Biphenols	
21.	Polynuclear Aromatic Hydrocarbons	
22.	Propylene Oxide	$\text{CH}_2\text{-CH-CH}_3$
23.	Tetrahydrothiophene	$\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{S}$
24.	Thiophene	CHCHCHCHS

Attachment B

TITLE 27. Environmental Protection

Division 2. Solid Waste

Subdivision 1. Consolidated Regulations for Treatment, Storage, Processing or Disposal of Solid

Chapter 3. Criteria for All Waste Management Units, Facilities, and Disposal Sites
Subchapter S. Closure and Post-Closure Maintenance

Article 2. Closure and Post-Closure Maintenance Standards for Disposal Sites and
Landfills

§21140. Section CIWMB -- Final Cover. (T14:§17773)

(a) The final cover shall function with minimum maintenance and provide waste containment to protect public health and safety by controlling at a minimum, vectors, fire, odor, litter and landfill gas migration. The final cover shall also be compatible with postclosure land use.

(b) In proposing a final cover design meeting the requirements under §21090, the owner or operator shall assure that the proposal meets the requirements of this section. Alternative final cover designs shall meet the performance requirements of ¶(a) and, for MSWLF units, 40 CFR 258.60(b); shall be approved by the enforcement agency for aspects of ¶(a).

(c) The EA may require additional thickness, quality, and type of final cover depending on, but not limited to the following:

- (1) a need to control landfill gas emissions and fires;
- (2) the future reuse of the site; and
- (3) provide access to all areas of the site as needed for inspection of monitoring and control facilities, etc.

NOTE

Authority cited: Sections 40502 and 43020, Public Resources Code; and Section 66796.22 (d), Government Code. Reference: Sections 43021 and 43103, Public Resources Code; and Section 66796.22(d), Government Code.

HISTORY

1. New section filed 6-18-97; operative 7-18-97 (Register 97, No. 25).

(Amended March 17, 2000)

Attachment C

TITLE 27. Environmental Protection

Division 2. Solid Waste

Subdivision 1. Consolidated Regulations for Treatment, Storage, Processing or Disposal of Solid

Chapter 3. Criteria for All Waste Management Units, Facilities, and Disposal Sites

Subchapter 2. Siting and Design

Article 2. SWRCB -- Waste Classification and Management

§20200. SWRCB -- Applicability and Classification Criteria. (CIS: §2520)

(a) Concept--This article contains a waste classification system which applies to solid wastes that cannot be discharged directly or indirectly to waters of the state and which therefore must be discharged to waste management units (Units) for treatment, storage, or disposal in accordance with the requirements of this division. Wastes which can be discharged directly or indirectly (*e.g., by percolation*) to waters of the state under effluent or concentration limits that implement applicable water quality control plans (*e.g., municipal or industrial effluent or process wastewater*) are not subject to the SWRCB-promulgated provisions of this division. This waste classification system shall provide the basis for determining which wastes may be discharged at each class of Unit. Waste classifications are based on an assessment of the potential risk of water quality degradation associated with each category of waste.

(1) The waste classifications in this article shall determine where the waste can be discharged unless the waste does not consist of or contain municipal solid waste (MSW) and the discharger establishes to the satisfaction of the RWQCB that a particular waste constituent or combination of constituents presents a lower risk of water quality degradation than indicated by classification according to this article.

(2) Discharges of wastes identified in §20210 or §20220 of this article shall be permitted only at Units which have been approved and classified by the RWQCB in accordance with the criteria established in Article 3 of this subchapter, and for which WDRs have been prescribed or waived pursuant to Article 4, Subchapter 3, Chapter 4 of this subdivision (§21710 et seq.). Table 2.1 (of this article) presents a summary of discharge options for each waste category.

(b) Dedicated Units/Cells For Certain Wastes--The following wastes shall be discharged only at dedicated Units [or dedicated landfill cells (*e.g., ash monofill cell*)] which are designed and constructed to contain such wastes:

(1) wastes which cause corrosion or decay, or otherwise reduce or impair the integrity of containment structures;

(2) wastes which, if mixed or commingled with other wastes can produce a violent reaction (including heat, pressure, fire or explosion), can produce toxic byproducts, or can produce any reaction product(s) which:

(A) requires a higher level of containment;

(B) is a restricted waste; or

(C) impairs the integrity of containment structures.

(c) Waste Characterization--Dischargers shall be responsible for accurate characterization of

Alternative Compliance Plan For Bradley Landfill, Issue No. 3
Rule 1150.1 (Cont.)

(Amended March 17, 2000)

wastes, including determinations of whether or not wastes will be compatible with containment features and other wastes at a Unit under ¶(b), and whether or not wastes are required to be managed as hazardous wastes under Chapter 11 of Division 4.5 of Title 22 of this code.

(d) Management of Liquids at Landfills and Waste Piles--The following requirements apply to discharges of liquids at Class II waste piles and at Class II and Class III landfills, except as otherwise required for MSW landfills by more-stringent state and federal requirements under SWRCB Resolution No. 93-62 section 2908 of Title 23 of this Code (see 40CFR258.28) [Note: see also definitions of "leachate" and "landfill gas condensate" in §20164]:

(1) [Reserved.];

(2) wastes containing free liquids shall not be discharged to a Class II waste pile. Any waste that contains liquid in excess of the moisture-holding capacity of the waste in the Class II landfill, or which contains liquid in excess of the moisture-holding capacity as a result of waste management operations, compaction, or settlement shall only be discharged to a surface impoundment or to another Unit with containment features equivalent to a surface impoundment; and

(3) liquids or semi-solid waste (i.e., waste containing less than 50 percent solids, by weight), other than dewatered sewage or water treatment sludge as described in §20220(c), shall not be discharged to Class III landfills. Exceptions may be granted by the RWQCB if the discharger can demonstrate that such discharge will not exceed the moisture-holding capacity of the landfill, either initially or as a result of waste management operations, compaction, or settlement, so long as such discharge is not otherwise prohibited by applicable state or federal requirements.

APPENDIX B

SUBSURFACE PERIMETER PROBE MONITORING

- Field Sheets
- Laboratory Analysis
- Sample Chain-of-Custody
- Instrumentation Calibration

BRADLEY LANDFILL GAS PROBE READINGS

EQUIPMENT USED: Landtec GEM 2000 (Serial No. 07406)
Calibrated to 15.0% CH₄.

TECHNICIAN: RAUL BONGATO

DATE: 10/24/05

START TIME: 8:28

BAROMETRIC (before): 29.04

BAROMETRIC (after): 29.04

FINISH TIME: 14:48

Probe No.	Static Pres. (In w.c.)	TOC (% CH ₄)	Action Level
W-1S	+0.0	0.0	
W-1M	-0.3	0.0	
W-1D	-0.5	0.0	
W-2A	-0.1	0.0	
W2B	+0.0	0.0	
W-3S	-0.1	0.0	
W-3M	-0.3	0.0	
W-3D	-0.7	0.0	
W-4	-0.2	0.0	
W-5S	-0.4	0.0	
W-5M	-0.6	0.0	
W-5D	-0.9	0.0	
W-6	-0.3	0.0	
W-7S	-0.3	0.0	
W-7M	-1.1	0.0	
W-7D	-0.9	0.0	
W-8	-0.1	0.0	
W-9A	-0.1	0.0	
W-9B	-0.3	0.0	
W-10S	-0.2	0.0	
W-10M	-0.6	0.0	
W10D	-0.5	0.0	
W-11	-0.1	0.0	
W-12S	-0.1	0.0	
W12M	-0.4	0.0	
W-12D	-0.1	0.0	
W-13	-0.1	0.0	
W-14S	-0.1	0.0	
W-14M	-0.2	0.0	
W-14D	-0.6	0.0	

[illegible][illegible]

- Action Levels:
- (1) All probes monitored show methane less than 3%. Fax to Ann Jones.
 - (2) Any probe showing methane concentrations equal or greater than 3% and less than 5%. (see instructions on reverse)
 - (3) Any probe containing methane concentrations of 5% or greater. (see instructions on reverse)
 - (4) Any probe exceeding 5% for 3 or more days (see instructions on reverse)

Monitoring Protocol: Probe monitoring is conducted in accordance with SCAQMD Rule 1150.1, Attachment A, Section 1.3.1. Prior to sampling each probe is evacuated until the Total Organic Compound concentrations remains constant for 30 seconds.

All probes at Action Level (1), No action items required: Yes / No

(If "No", please see attached Action Taken and Notification sheet)

Technician:

Date:

10/24/05

BRADLEY LANDFILL GAS PROBE READINGS

EQUIPMENT USED: Landtec GEM 2000 (Serial No. 07406)
Calibrated to 15.0% CH₄.

BAROMETRIC (before): _____

TECHNICIAN: Tom Sadler

BAROMETRIC (after): _____

DATE: 10/27/05

START TIME: 16:28

FINISH TIME: 16:39

Probe No.	Static Pres. (in w.c.)	TOC (% CH ₄)	Action Level
W-1S			
W-1M			
W-1D			
W-2A			
W2B			
W-3S			
W-3M			
W-3D			
W-4			
W-5S			
W-5M			
W-5D			
W-6			
W-7S			
W-7M			
W-7D			
W-8			
W-9A			
W-9B			
W-10S			
W-10M			
W10D			
W-11			
W-12S			
W12M			
W-12D			
W-13			
W-14S			
W-14M			
W-14D			

[illegible][illegible]

- Action Levels: (1) All probes monitored show methane less than 3%. Fax to Ann Jones.
(2) Any probe showing methane concentrations equal or greater than 3% and less than 5%. (see instructions on reverse)
(3) Any probe containing methane concentrations of 5% or greater, (see instructions on reverse)
(4) Any probe exceeding 5% for 3 or more days (see instructions on reverse)

Monitoring Protocol: Probe monitoring is conducted in accordance with SCAQMD Rule 1150.1, Attachment A, Section 1.3.1. Prior to sampling each probe is evacuated until the Total Organic Compound concentrations remains constant for 30 seconds.

All probes at Action Level (1), No action items required: Yes / No

Technician: Monica Davidson Date: 10/27/05

(If "No", please see attached Action Taken and Notification sheet)

Monthly

EQUIPMENT USED: Landtec GEM 2000 (Serial No. 07406)

Calibrated to 15.0% CH₄.

TECHNICIAN: RAUL BONGATO

DATE: 11/21/05

START TIME: 8:27

FINISH TIME: 11:18

[illegible]

- Action Levels: (1) All probes monitored show methane less than 3%. Fax to Ann Jones.
 (2) Any probe showing methane concentrations equal or greater than 3% and less than 5%. (see instructions on reverse)
 (3) Any probe containing methane concentrations of 5% or greater, (see instructions on reverse)
 (4) Any probe exceeding 5% for 3 or more days (see instructions on reverse)

Monitoring Protocol: Probe monitoring is conducted in accordance with SCAQMD Rule 1150.1, Attachment A, Section 1.3.1. Prior to sampling each probe is evacuated until the Total Organic Compound concentrations remains constant for 30 seconds.

All probes at Action Level (1), No action items required: ☒ Yes / No

(If "No", please see attached Action Taken and Notification sheet)

Technician

Date:

14/21/05

Monthly

EQUIPMENT USED: Landtec GEM 2000 (Serial No. 07401)

BAROMETRIC (before): 29.11.

TECHNICIAN: VICTOR LAM

BAROMETRIC (after): 29.02

DATE: 11-21-05

START TIME: 0829

FINISH TIME: 1128

[illegible][illegible]

- Action Levels: (1) All probes monitored show methane less than 3%. Fax to Ann Jones.
(2) Any probe showing methane concentrations equal or greater than 3% and less than 5%. (see instructions on reverse)
(3) Any probe containing methane concentrations of 5% or greater. (see instructions on reverse)
(4) Any probe exceeding 5% for 3 or more days (see instructions on reverse)

Monitoring Protocol: Probe monitoring is conducted in accordance with SCAQMD Rule 1150.1, Attachment A, Section 1.3.1. Prior to sampling each probe is evacuated until the Total Organic Compound concentrations remains constant for 30 seconds.

All probes at Action Level (1), No action items required: Yes / No

Technician: *AKC*

Date: 11-21-05

(If "No", please see attached Action Taken and Notification sheet)

Monthly

EQUIPMENT USED: Landtec GEM 2000 (Serial No. 7406)

BAROMETRIC (before): 29.11

BAROMETRIC (after): 29.02

DATE: 11/01/05

START TIME: 5:10

FINISH TIME: 5:40

Probe No.	Static Pres. (in w.c.)	TOC (% CH ₄)	Action Level
W-1S			
W-1M			
W-1D			
W-2A			
W-2B			
W-3S			
W-3M			
W-3D			
W-4			
W-5S			
W-5M			
W-5D			
W-6			
W-7S			
W-7M			
7D			
W-8			
W-9A			
W-9B			
W-10S			
W-10M			
W-10D			
W-11			
W-12S			
W-12M			
W-12D			
W-13			
W-14S			
W-14M			
W-14D			

[illegible][illegible]

- Action Levels: (1) All probes monitored show methane less than 3%. Fax to Ann Jones.
(2) Any probe showing methane concentrations equal or greater than 3% and less than 5%. (see instructions on reverse)
(3) Any probe containing methane concentrations of 5% or greater, (see instructions on reverse)
(4) Any probe exceeding 5% for 3 or more days (see instructions on reverse)

Monitoring Protocol: Probe monitoring is conducted in accordance with SCAQMD Rule 1150.1, Attachment A, Section 1.3.1. Prior to sampling each probe is evacuated until the Total Organic Compound concentrations remains constant for 30 seconds.

All probes at Action Level (1), No action items required: Yes / No

(If "No", please see attached Action Taken and Notification sheet)

Technician:

Date: 11/21/08

Month Log

BAROMETRIC (before): 29.15

BAROMETRIC (after): 29.06

TECHNICIAN: RAUL BONGATO

DATE: 12/12/05

START TIME: 07:53

FINISH TIME: 15:09

Probe No.	Static Pres. (in w.c.)	TOC (%CH ₄)	Action Level
W-1S	+0.1	0.0	1
W-1M	+0.0	0.0	1
W-1D	-0.1	0.0	1
W-2A	+0.1	0.0	1
W-2B	+0.1	0.0	1
W-3S	+0.1	0.0	1
W-3M	+0.0	0.0	1
W-3D	-0.3	0.0	1
W-4	+0.0	0.0	1
W-5S	+0.0	0.0	1
W-5M	-0.2	0.0	1
W-5D	-0.6	0.0	1
W-6	+0.0	0.0	1
W-7S	+0.0	0.0	1
W-7M	+0.0	0.0	1
W-7D	-0.7	0.0	1
W-8	+0.0	0.0	1
W-9A	+0.0	0.0	1
W-9B	+0.0	0.0	1
W-10S	+0.1	0.0	1
W-10M	-0.3	0.0	1
W-10D	+0.0	0.0	1
W-11	+0.1	0.0	1
W-12S	+0.1	0.0	1
W-12M	-0.2	0.0	1
W-12D	+0.1	0.0	1
W-13	+0.0	0.0	1
W-14S	+0.1	0.0	1
W-14M	+0.0	0.0	1
W-14D	-0.3	0.0	1

[illegible][illegible]

- Action Levels:** (1) All probes monitored show methane less than 3%. Fax to Ann Jones.
 (2) Any probe showing methane concentrations equal or greater than 3% and less than 5%. (see instructions on reverse)
 (3) Any probe containing methane concentrations of 5% or greater, (see instructions on reverse)
 (4) Any probe exceeding 5% for 3 or more days (see instructions on reverse)

Monitoring Protocol: Probe monitoring is conducted in accordance with SCAQMD Rule 1150.1, Attachment A, Section 1.3.1. Prior to sampling each probe is evacuated until the Total Organic Compound concentrations remain constant for 30 seconds.

All probes at Action Level (1). No action items required: Yes / No

Technician: DISPONGER Date: 12/12/05

(If "No", please see attached Action Taken and Notification sheet)

LEA (Mike Mercado) onsite today - reading Probes



AtmAA Inc.

23917 Craftsman Rd., Calabasas, CA 91302 • (818) 223-3277 • FAX (818) 223-8250

LABORATORY ANALYSIS REPORT

environmental consultants
laboratory services

SCAQMD Rule 1150.1 Components Analysis in Probe Tedlar Bag Sample

Report Date: November 3, 2005

Client: Shaw Environmental

Project Location: Bradley Landfill

Date Received: October 28, 2005

Date Analyzed: October 28 & 31, 2005

AtmAA Lab No.: 03015-27
Sample I.D.: Probe E-8D

BL-001

Components	(Concentration in %,v)
Nitrogen	51.2
Oxygen	9.36
Methane	18.2
Carbon dioxide	19.4

	(Concentration in ppmv)
TGNMO	9980
Hydrogen sulfide	<0.5

	(Concentration in ppbv)
Benzene	134
Benzylchloride	<40
Chlorobenzene	<30
Dichlorobenzenes*	<30
1,1-dichloroethane	418
1,2-dichloroethane	176
1,1-dichloroethylene	<30
Dichloromethane	<30
1,2-dibromoethane	<30
Perchloroethylene	<30
Carbon tetrachloride	<30
Toluene	302
1,1,1-trichloroethane	<20
Trichloroethene	<20
Chloroform	<20
Vinyl chloride	1620
m+p-xylenes	169
o-xylene	65.7

The accuracy of permanent gas analysis by TCD/GC is +/- 2%, actual results are reported.

The reported oxygen concentration includes any argon present in the sample. Calibration is based on a standard atmosphere containing 20.95% oxygen and 0.93% argon.

TGNMO is total gaseous non-methane organics (excluding ethane), reported as ppm methane.

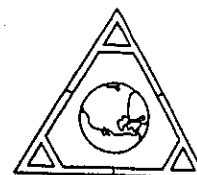
*total amount containing meta, para, and ortho isomers


Michael L. Porter
Laboratory Director

QUALITY ASSURANCE SUMMARY
(Repeat Analyses)

Project Location: Bradley Landfill
Date Received: October 28, 2005
Date Analyzed: October 28 & 31, 2005

Components	Sample ID	Repeat Analysis		Mean Conc.	% Diff. From Mean
		Run #1	Run #2		
		(Concentration in %,v)			
Nitrogen	Probe E-8D	51.2	51.1	51.2	0.10
Oxygen	Probe E-8D	9.30	9.41	9.36	0.59
Methane	Probe E-8D	18.3	18.1	18.2	0.55
Carbon dioxide	Probe E-8D	19.3	19.5	19.4	0.52
(Concentration in ppmv)					
TGNMO	Probe E-8D	10100	9870	9980	1.2
Hydrogen sulfide	Probe E-8D	<0.5	<0.5	---	---
(Concentration in ppbv)					
Benzene	Probe E-8D	136	133	134	1.1
Benzylchloride	Probe E-8D	<40	<40	---	---
Chlorobenzene	Probe E-8D	<30	<30	---	---
Dichlorobenzenes	Probe E-8D	<30	<30	---	---
1,1-dichloroethane	Probe E-8D	423	414	418	1.1
1,2-dichloroethane	Probe E-8D	176	176	176	0.0
1,1-dichloroethylene	Probe E-8D	<30	<30	---	---
Dichloromethane	Probe E-8D	<30	<30	---	---
1,2-dibromoethane	Probe E-8D	<30	<30	---	---
Perchloroethylene	Probe E-8D	<30	<30	---	---
Carbon tetrachloride	Probe E-8D	<30	<30	---	---



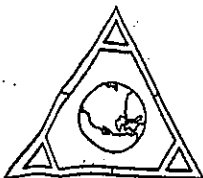
QUALITY ASSURANCE SUMMARY
(Repeat Analyses)
(continued)

Components	Sample ID	Repeat Analysis		Mean Conc.	% Diff. From Mean
		Run #1	Run #2		
		(Concentration in ppbv)			
Toluene	Probe E-8D	306	297	302	1.5
1,1,1-trichloroethane	Probe E-8D	<20	<20	---	---
Trichloroethene	Probe E-8D	<20	<20	---	---
Chloroform	Probe E-8D	<20	<20	---	---
Vinyl chloride	Probe E-8D	1620	1630	1620	0.31
m+p-xylenes	Probe E-8D	172	166	169	1.8
o-xylene	Probe E-8D	67.8	63.6	65.7	3.2

One Tedlar bag sample, laboratory number 03015-27, was analyzed for SCAQMD Rule 1150.1 components, permanent gases, and total gaseous non-methane organics (TGNMO). Agreement between repeat analyses is a measure of precision and is shown above in the column "% Difference from Mean". Repeat analyses are an important part of AtmAA's quality assurance program. The average % Difference from Mean for 12 repeat measurements from the one Tedlar bag sample is 1.0%.



Shaw Environmental and Infrastructure Inc.



AtmAA Inc.

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LABORATORY ANALYSIS REPORT

environmental consultants
laboratory services

SCAQMD Rule 1150.1 Components Analysis in Probe Tedlar Bag Sample

Report Date: December 5, 2005

Client: Shaw Environmental

Project Location: Bradley Landfill

Date Received: November 23, 2005

Date Analyzed: November 23, 2005

AtmAA Lab No.: 03275-6

Sample I.D.: Probe E-8D

BL-001

Components

	(Concentration in %,v)
Nitrogen	13.7
Oxygen	0.24
Methane	50.2
Carbon dioxide	35.2

	(Concentration in ppmv)
TGNMO	13000
Hydrogen sulfide	<0.5

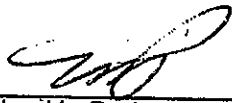
	(Concentration in ppbv)
Benzene	135
Benzylchloride	<40
Chlorobenzene	<30
Dichlorobenzenes*	<30
1,1-dichloroethane	490
1,2-dichloroethane	<20
1,1-dichloroethylene	<30
Dichloromethane	<30
1,2-dibromoethane	<30
Perchloroethylene	<30
Carbon tetrachloride	<30
Toluene	<20
1,1,1-trichloroethane	<20
Trichloroethene	<20
Chloroform	<20
Vinyl chloride	1940
m+p-xylenes	<30
o-xylene	<20

The accuracy of permanent gas analysis by TCD/GC is +/- 2%, actual results are reported.

The reported oxygen concentration includes any argon present in the sample. Calibration is based on a standard atmosphere containing 20.95% oxygen and 0.93% argon.

TGNMO is total gaseous non-methane organics (excluding ethane), reported as ppm methane.

* total amount containing meta, para, and ortho isomers


Michael L. Porter
Laboratory Director



AtmAA Inc.

23917 Craftsman Rd., Calabasas, CA 91302 • (818) 223-3277 • FAX (818) 223-8250

LABORATORY ANALYSIS REPORT

environmental consultants
laboratory services

SCAQMD Rule 1150.1 Components Analysis in Probe Tedlar Bag Sample

Report Date: December 19, 2005
Client: Shaw Environmental
Project Location: Bradley Landfill
Date Received: December 12, 2005
Date Analyzed: December 12-14, 2005

AtmAA Lab No.: 03465-20
Sample I.D.: Probe E-8D
BL-001

Components	(Concentration in %,v)
Nitrogen	15.2
Oxygen	1.14
Methane	48.1
Carbon dioxide	34.2

	(Concentration in ppmv)
TGNMO	556
Hydrogen sulfide	<0.5


	(Concentration in ppbv)
Benzene	<20
Benzylchloride	<40
Chlorobenzene	<30
Dichlorobenzenes*	<30
1,1-dichloroethane	<30
1,2-dichloroethane	<20
1,1-dichloroethylene	<30
Dichloromethane	<30
1,2-dibromoethane	<30
Perchloroethylene	<30
Carbon tetrachloride	<30
Toluene	61.6
1,1,1-trichloroethane	<20
Trichloroethene	<20
Chloroform	<20
Vinyl chloride	308
m+p-xylenes	112
o-xylene	53.2

The accuracy of permanent gas analysis by TCD/GC is +/- 2%, actual results are reported.

The reported oxygen concentration includes any argon present in the sample. Calibration is based on a standard atmosphere containing 20.95% oxygen and 0.93% argon.

TGNMO is total gaseous non-methane organics (excluding ethane), reported as ppm methane.

* total amount containing meta, para, and ortho isomers


Michael L. Porter
Laboratory Director

QUALITY ASSURANCE SUMMARY
(Repeat Analyses)

Project Location: Bradley Landfill
Date Received: December 12, 2005
Date Analyzed: December 12-14, 2005

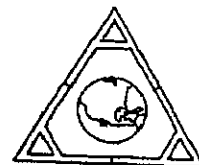
Components	Sample ID	Repeat Analysis		Mean Conc.	% Diff. From Mean
		Run #1	Run #2		
		(Concentration in %,v)			
Nitrogen	Probe E-8D	15.1	15.2	15.2	0.33
Oxygen	Probe E-8D	1.15	1.12	1.14	1.3
Methane	Probe E-8D	47.8	48.4	48.1	0.62
Carbon dioxide	Probe E-8D	34.0	34.5	34.2	0.73
(Concentration in ppmv)					
TGNMO	Probe E-8D	564	548	556	1.4
Hydrogen sulfide	Probe E-8D	<0.5	<0.5	---	---
(Concentration in ppbv)					
Benzene	Probe E-8D	<20	<20	---	---
Benzylchloride	Probe E-8D	<40	<40	---	---
Chlorobenzene	Probe E-8D	<30	<30	---	---
Dichlorobenzenes	Probe E-8D	<30	<30	---	---
1,1-dichloroethane	Probe E-8D	<30	<30	---	---
1,2-dichloroethane	Probe E-8D	<20	<20	---	---
1,1-dichloroethylene	Probe E-8D	<30	<30	---	---
Dichloromethane	Probe E-8D	<30	<30	---	---
1,2-dibromoethane	Probe E-8D	<30	<30	---	---
Perchloroethylene	Probe E-8D	<30	<30	---	---
Carbon tetrachloride	Probe E-8D	<30	<30	---	---



QUALITY ASSURANCE SUMMARY
(Repeat Analyses)
(continued)

Components	Sample ID	Repeat Analysis		Mean Conc.	% Diff. From Mean
		Run #1	Run #2		
		(Concentration in ppbv)			
Toluene	Probe E-8D	62.3	60.8	61.6	1.2
1,1,1-trichloroethane	Probe E-8D	<20	<20	---	---
Trichloroethene	Probe E-8D	<20	<20	---	---
Chloroform	Probe E-8D	<20	<20	---	---
Vinyl chloride	Probe E-8D	309	307	308	0.32
m+p-xylenes	Probe E-8D	111	112	112	0.45
o-xylene	Probe E-8D	53.6	52.8	53.2	0.75

One Tedlar bag sample, laboratory number 03465-20, was analyzed for SCAQMD Rule 1150.1 components, permanent gases, and total gaseous non-methane organics (TGNMO). Agreement between repeat analyses is a measure of precision and is shown above in the column "% Difference from Mean". Repeat analyses are an important part of AtmAA's quality assurance program. The average % Difference from Mean for 9 repeat measurements from the one Tedlar bag sample is 0.79%.



**Shaw Environmental and Infrastructure Inc.**

Company Name: *Shaw Environmental & Infra., Inc.*

Address: 9081 Tujunga Avenue

City / State / Zip: Sun Valley, CA 91352

Manager: Darrell Thompson

Phone/Fax Number: (818) 767-0444

Send Report To: *Tom Sandhu*

Address: 9081 Tujunga Avenue

City: Sun Valley, CA 91352

Project Contact: Tom Sandhu

Phone/Fax Number: (818) 822-5273

CHAIN OF CUSTODY

Project Number: 108341.01

Project Name: *Bradley Landfill*

Project Location: *Sun Valley, California*

Purchase Order #:

Lab Destination: *AtmAA, Inc.*

Lab Contact: *Michael*

Lab Phone #: (818) 223-3277

Program

	Navy
	AFCEE
	DOT
X	USACE
	NPDES
	RCRA
	Other

Ref. Document #

Page 1 of 1

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APPENDIX C

INTEGRATED SURFACE EMISSION MONITORING

- Field Sheets
- Laboratory Analysis
- Sample Chain-of-Custody
- Integrated Sampling QA/QC Forms
- Instrumentation Calibration

BRADLEY LANDFILL

INTEGRATED LANDFILL SURFACE MONITORING

Personnel: Craig Mackley Big Damb
Bill Ross Jason Minster
Johnny Espinoza Ed Custer

Date: 11-15-05 Instrument Used: ISS 1-6

Temperature: 68°

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	ROTO-MTR, CC/MIN	WIND SPEED, MPH/DIRECT	REMARKS
69	CM	0730	0755	8	1333	3 8	
70	BR	0730	0755	5		3 8	
77	JE	0730	0755	5		3 8	
76	BD	0730	0755	8		3 8	
25	JM	0730	0755	30		3 8	
78	EG	0730	0755	10		3 8	
107	CM	0800	0825	8		4 9	
108	BR	0800	0825	10		4 9	
111	JE	0800	0825	20		4 9	
112	BD	0800	0825	10		4 9	
93	JM	0800	0825	8		4 9	
56	EG	0800	0825	10		4 9	
50	CM	0830	0855	8		4 10	
53	BR	0830	0855	10		4 10	
57	JE	0830	0855	10		4 10	
64	BD	0830	0855	8		4 10	
67	JM	0830	0855	8		4 10	
71	EG	0830	0855	5		4 10	
79	CM	0900	0925	5		4 10	
82	BR	0900	0925	6		4 10	
86	JE	0900	0925	8		4 10	
88	BD	0900	0925	8		4 10	
94	JM	0900	0925	8		4 10	
97	EG	0900	0925	6		4 10	
101	CM	0930	0955	5		4 12	
104	BR	0930	0955	5		4 12	
113	JE	0930	0955	5		4 12	
43	BD	0930	0955	6		4 12	
41	JM	0930	0955	6		4 12	
42	EG	0930	0955	5		4 12	

Attach Calibration Sheet
 Attach site map showing grid ID

BRADLEY LANDFILL

INTEGRATED LANDFILL SURFACE MONITORING

Personnel:

Craig Markley

Brian Darr

Bill Ross

Jason Minster

Johnny Epimora

Ed Gutierrez

Date: 11-15-05

Instrument Used:

ISS 1-6

Temperature: _____

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	ROTO-MTR, CC/MIN	WIND SPEED, MPH/DIRECT	REMARKS
32	CM	1000	1025	5	0.333	4 12	
33	BR	1000	1025	5		4 12	
1	JE	1000	1025	10		4 12	
2	BD	1000	1025	15		4 12	
3	JM	1000	1025	30		4 12	
4	EG	1000	1025	10		4 12	
5	CM	1030	1055	10		3 11	
6	BR	1030	1055	8		3 11	
7	JE	1030	1055	8		3 11	
8	BD	1030	1055	5		3 11	
9	JM	1030	1055	5		3 11	
10	EG	1030	1055	5		3 11	
20	CM	1200	1225	5		4 10	
21	BR	1200	1225	5		4 10	
22	JE	1200	1225	5		4 10	
23	BD	1200	1225	5		4 10	
37	JM	1200	1225	5		4 10	
24	EG	1200	1225	5		4 10	
34	CM	1230	1255	5		4 11	
35	BR	1230	1255	5		4 11	
36	JE	1230	1255	5		4 11	
38	BD	1230	1255	5		4 11	
44	JM	1230	1255	5		4 11	
46	EG	1230	1255	5		4 11	
48	CM	1300	1325	5		4 10	
51	BR	1300	1325	5		4 10	
54	JE	1300	1325	5		4 10	
58	BD	1300	1325	5		4 10	
65	JM	1300	1325	5		4 10	
68	EG	1300	1325	5		4 10	

Attach Calibration Sheet

Attach site map showing grid ID

BRADLEY LANDFILL

INTEGRATED LANDFILL SURFACE MONITORING

Personnel:

Craig Markley
Bill Paces

Jesus Sanchez

Joey Taring

Jason Minstons

Ed Gutierrez

Johnny Espinoza

Dick Dada

Date: 11-16-05 Instrument Used: JSS 1-S

Temperature: _____

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	ROTO-MTR, CC/MIN	WIND SPEED, MPH/DIRECT	REMARKS
39	CM	1130	1155	5	.333	4 9	
45	BR	1130	1155	5		4 9	
47	JE	1130	1155	5		4 9	
49	JS	1130	1155	5		4 9	
52	JT	1130	1155	5		4 9	
55	BD	1130	1155	5		4 9	
60	JM	1130	1155	5		4 9	
40	EG	1130	1155	5		4 9	
61	CM	1200	1225	5		4 10	
59	BR	1200	1225	5		4 10	
66	JE	1200	1225	5		4 10	
72	JS	1200	1225	5		4 10	
80	JT	1200	1225	5		4 10	
83	BD	1200	1225	5		4 10	
73	JM	1200	1225	5		4 10	
81	EG	1200	1225	5		4 10	
84	CM	1230	1255	5		4 10	
85	BR	1230	1255	5		4 10	
90	JE	1230	1255	5		4 10	
87	JS	1230	1255	5		4 10	
89	JT	1230	1255	5		4 10	
95	BD	1230	1255	5		4 10	
98	JM	1230	1255	5		4 10	
102	EG	1230	1255	5		4 10	
105	CM	1300	1325	5		4 11	
109	BR	1300	1325	5		4 11	
114	JE	1300	1325	5		4 11	
118	JS	1300	1325	5		4 11	
123	JT	1300	1325	5		4 11	
124	BD	1300	1325	5	V	4 11	

Attach Calibration Sheet

Attach site map showing grid ID

BRADLEY LANDFILL

INTEGRATED LANDFILL SURFACE MONITORING

Personnel:

Craig Mathley

Jason Minstaken

Bic Donk

Johnny Espinoza

Joey Tally

Bill Ross

Ed Gutierrez

Date: 11-28-05 Instrument Used: ISS 1-6

Temperature: 55°

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	ROTO-MTR, CC/MIN	WIND SPEED, MPH/DIRECT	REMARKS
19	CM	0730	0755	5	1.333	3 10	
11	JE	0730	0755	5		3 10	
12	BR	0730	0755	5		3 10	
13	JM	0730	0755	6		3 10	
14	JT	0730	0755	7		3 10	
15	EG	0730	0755	5		3 10	
16	BD	0730	0755	8		3 10	
17	CM	0800	0825	8		2 10	
18	JE	0800	0825	5		2 10	
25	BR	0800	0825	5		2 10	
26	JM	0800	0825	6		2 10	
27	JT	0800	0825	5		2 10	
28	EG	0800	0825	5		2 10	
29	BD	0800	0825	5		2 10	
30	CM	0830	0855	5		2 10	
31	JE	0830	0855	5		2 10	
62	BR	0830	0855	6		2 10	
63	JM	0830	0855	7		2 10	
74	JT	0830	0855	5		2 10	
91	EG	0830	0855	5		2 10	
92	BD	0830	0855	8		2 10	
100	CM	0900	0925	8		3 11	
130	JE	0900	0925	5		3 11	
128	BR	0900	0925	8		3 11	
121	JM	0900	0925	5		3 11	
122	JT	0900	0925	5		3 11	
126	EG	0900	0925	5		3 11	
127	BD	0900	0925	5		3 11	
131	CM	0930	0955	7		3 12	
132	JE	0930	0955	5	✓	3 12	

Attach Calibration Sheet

Attach site map showing grid ID

INTEGRATED LANDFILL SURFACE MONITORING

Craig Markley

Jason Minsterra

Bic Dawn

Johnny Espinoza

Joey Tang

Bill Ross

Ed. C. ...

Temperature: _____

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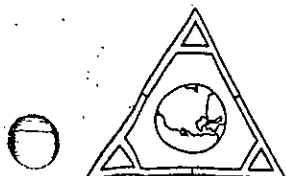
Attach Calibration Sheet
Attach site map showing grid ID

INTEGRATED LANDFILL SURFACE MONITORING

Craig Mackley

Temperature; _____

[illegible]Page 1 of 1



AtmAA Inc.

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LABORATORY ANALYSIS REPORT

environmental consultants
laboratory services

SCAQMD Rule 1150.1 Components Analysis in Integrated Surface Tedlar Bag Samples

Report Date: December 6, 2005

Client: Shaw Environmental

Project Location: Bradley Landfill

Date Received: November 29, 2005

Date Analyzed: November 29-December 1, 2005

AtmAA Lab No.:	03335-2	03335-3
Sample I.D.:	ISS	ISS
	Grid 3	Grid 111

Components

(Concentration in ppmv)

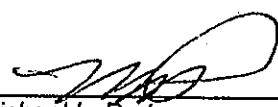
Methane	9.54	74.4
TGNMO	1.78	2.15

(Concentration in ppbv)

Hydrogen sulfide	<50	<50
Benzene	0.63	0.38
Benzylchloride	<0.4	<0.4
Chlorobenzene	<0.2	<0.2
Dichlorobenzenes*	<1.1	<1.1
1,1-dichloroethane	<0.2	<0.2
1,2-dichloroethane	<0.2	<0.2
1,1-dichloroethylene	<0.2	<0.2
Dichloromethane	0.26	<0.2
1,2-dibromoethane	<0.2	<0.2
Perchloroethylene	<0.1	<0.1
Carbon tetrachloride	0.12	0.15
Toluene	2.89	2.18
1,1,1-trichloroethane	<0.1	<0.1
Trichloroethene	<0.1	<0.1
Chloroform	<0.1	<0.1
Vinyl chloride	<0.2	<0.2
m+p-xylenes	2.35	1.52
o-xylene	0.88	0.51

TGNMO is total gaseous non-methane organics measured and reported as ppm methane.

* total amount containing meta, para, and ortho isomers


Michael L. Porter
Laboratory Director

QUALITY ASSURANCE SUMMARY
(Repeat Analyses)

Project Location: Bradley Landfill
Date Received: November 29, 2005
Date Analyzed: November 29-December 1, 2005

Components	Sample ID	Repeat Analysis		Mean Conc.	% Diff. From Mean
		Run #1	Run #2		
Methane	Grid 3	9.52	9.57	9.54	0.26
TGNMO	Grid 3	1.82	1.73	1.78	2.5
		(Concentration in ppmv)			
Hydrogen sulfide	Grid 3	<50	<50	---	---
Benzene	Grid 3	0.63	0.63	0.63	0.0
Benzylchloride	Grid 3	<0.4	<0.4	---	---
Chlorobenzene	Grid 3	<0.2	<0.2	---	---
Dichlorobenzenes	Grid 3	<1.1	<1.1	---	---
1,1-dichloroethane	Grid 3	<0.2	<0.2	---	---
1,2-dichloroethane	Grid 3	<0.2	<0.2	---	---
1,1-dichloroethylene	Grid 3	<0.2	<0.2	---	---
Dichloromethane	Grid 3	0.23	0.29	0.26	12
1,2-dibromoethane	Grid 3	<0.2	<0.2	---	---
Perchloroethylene	Grid 3	<0.1	<0.1	---	---
Carbon tetrachloride	Grid 3	0.13	0.10	0.12	13
Toluene	Grid 3	2.81	2.97	2.89	2.8
1,1,1-trichloroethane	Grid 3	<0.1	<0.1	---	---
Trichloroethene	Grid 3	<0.1	<0.1	---	---
Chloroform	Grid 3	<0.1	<0.1	---	---
Vinyl chloride	Grid 3	<0.2	<0.2	---	---
m+p-xylenes	Grid 3	2.53	2.17	2.35	7.6
o-xylene	Grid 3	0.92	0.83	0.88	5.1

Two Tedlar bag samples, laboratory numbers 03335-(2 & 3), were analyzed for SCAQMD Rule 1150.1 components, methane, and total gaseous non-methane organics (TGNMO). Agreement between repeat analyses is a measure of precision and is shown above in the column "% Difference from Mean". Repeat analyses are an important part of AtmAA's quality assurance program. The average % Difference from Mean for 8 repeat measurements from two Tedlar bag samples is 5.4%.



[illegible]

LOCATION: Bradley Landfill

INTEGRATED SURFACE SAMPLING SHEET

GRID # 3

DATE: 11-28-05

SAMPLE # -

FLOW START: 333 cc

CLASS # -

FLOW STOP: 333 cc

BAG # -

TIME START: 1100

SAMPLER # 1

TIME STOP: 1125

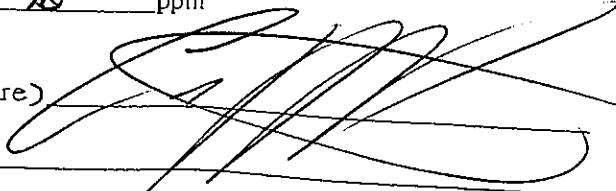
WIND SPEED _____ mph

BAG STATUS:

WIND DIRECTION _____ 16 pt

☒ FULL ☐ 3/4
☐ 1/2 ☐ 1/4

METHANE
CONCENTRATION: 10 ppm

TECHNICIAN: (Signature) 

THE TECHNICIAN WILL BE INSPECTING FOR THE FOLLOWING:

- | | | |
|------------------------|----------------------------------|--------------|
| 1. SETTLEMENT CRACKS; | 2. SHRINKAGE CRACKS; | 3. SLUMPING; |
| 4. SURFACE DEPRESSION; | 5. EXCESSIVELY DRY OR WET AREAS; | |
| 6. RODENT BURROWS; | 7. COVER SOIL EROSIONS | |

COMMENTS: _____



LOCATION: Bradley Landfill

INTEGRATED SURFACE SAMPLING SHEET

GRID # 111

SAMPLE # -

CLASS # -

BAG # -

SAMPLER # 5

WIND SPEED _____ mph

WIND DIRECTION _____ 16 pt

METHANE
CONCENTRATION: 10 ppm

DATE: 11-28-05

FLOW START: 333 cc

FLOW STOP: 333 cc

TIME START: 1100

TIME STOP: 1125

BAG STATUS:

() FULL () 3/4
() 1/2 () 1/4

TECHNICIAN: (Signature) [Signature]

THE TECHNICIAN WILL BE INSPECTING FOR THE FOLLOWING:

- | | | |
|------------------------|----------------------------------|--------------|
| 1. SETTLEMENT CRACKS; | 2. SHRINKAGE CRACKS; | 3. SLUMPING; |
| 4. SURFACE DEPRESSION; | 5. EXCESSIVELY DRY OR WET AREAS; | |
| 6. RODENT BURROWS; | 7. COVER SOIL EROSIONS | |

COMMENTS: _____

ENVIRONMENTAL INC.

OVA CALIBRATION LOG

Landfill: Bradley

[illegible]

APPENDIX D

INSTANTANEOUS SURFACE EMISSION MONITORING

- Field Sheets
- Instrumentation Calibration

BRADLEY LANDFILL

INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel:

Craig Mahley
Bill Ross
Johnny Espinoza

Ed Gutierrez
Rhaph Masio

Date: 10-10-05 Instrument Used: DVA 128-88-105

Temperature: _____

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	REMARKS
114	CM	1015	1030	5	
118	BR	1015	1030	5	
123	JE	1015	1030	5	
124	EG	1015	1030	5	
127	RM	1015	1030	5	
131	CM	1030	1045	5	
132	BR	1030	1045	5	
7	JE	1030	1045	5	
8	EG	1030	1045	5	
9	RM	1030	1045	5	
10	CM	1045	1100	5	
31	BR	1045	1100	5	
63	JE	1045	1100	5	
20	EG	1045	1100	5	
21	RM	1045	1100	5	
22	CM	1100	1115	5	
23	BR	1100	1115	5	
24	JE	1100	1115	5	
37	EG	1100	1115	5	
39	RM	1100	1115	5	
45	CM	1200	1215	5	
47	BR	1200	1215	5	
49	JE	1200	1215	5	
52	EG	1200	1215	5	
55	RM	1200	1215	5	
60	CM	1215	1230	5	
40	BR	1215	1230	5	
61	JE	1215	1230	5	
59	EG	1215	1230	5	
66	RM	1215	1230	5	

Attach Calibration Sheet

Attach site map showing grid ID

BRADLEY LANDFILL

INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel:

Craig Markley
Bill Ross
Johnny Espinoza

Ed Gutierrez
Rhelo Marrio

Date: 10-10-05 Instrument Used: OVA 128-88-108

Temperature: 68°

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	REMARKS
1	CM	0715	0730	5	
2	BR	0715	0730	5,000	For spots lower slope
3	JE	0715	0730	5	
4	EG	0715	0730	10,000	lower slope, upper slope line of flags
5	RM	0715	0730	10,000	Well 87
6	CM	0730	0745	5	
32	BR	0730	0745	5	
33	JE	0730	0745	5	
34	EG	0730	0745	5	
41	RM	0730	0745	5	
42	CM	0745	0800	5	
56	BR	0745	0800	5	
43	JE	0745	0800	5	
50	EG	0745	0800	5	
53	RM	0745	0800	5	
69	CM	0800	0815	5	
57	BR	0800	0815	5	
64	JE	0800	0815	5	
70	EG	0800	0815	5	
75	RM	0800	0815	5	
76	CM	0815	0830	5	
77	BR	0815	0830	5	
78	JE	0815	0830	5	
107	EG	0815	0830	5	
108	RM	0815	0830	5	
111	CM	0830	0845	5	
112	BR	0830	0845	10,000	line of flags next to Headst
93	JE	0830	0845	5,000	Well 205
113	EG	0830	0845	5	
67	RM	0830	0845	5	

Attach Calibration Sheet
Attach site map showing grid ID

BRADLEY LANDFILL

INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel:

Craig Malley
Bill Ross

Ed Gutierrez
Rhett Martin

Johnny Espinoza

Date: 10-10-05

Instrument Used: OVA 128-88-108

Temperature: _____

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	REMARKS
35	CM	0845	0900	5	
36	BR	0845	0900	5	
38	JE	0845	0900	5	
44	EG	0845	0900	5	
46	RM	0845	0900	5	
48	CM	0900	0915	5	
51	BR	0900	0915	5	
54	JE	0900	0915	5	
58	EG	0900	0915	5	
65	RM	0900	0915	5	
68	CM	0915	0930	5	
71	BR	0915	0930	5	
79	JE	0915	0930	5	
82	EG	0915	0930	5	
86	RM	0915	0930	5	
88	CM	0930	0945	5	
94	BR	0930	0945	5	
97	JE	0930	0945	5	
101	EG	0930	0945	5	
104	RM	0930	0945	5	
72	CM	0945	1000	5	
80	BR	0945	1000	5	
83	JE	0945	1000	5	
87	EG	0945	1000	5	
89	RM	0945	1000	5	
95	CM	1000	1015	5	
98	BR	1000	1015	5	
102	JE	1000	1015	5	
105	EG	1000	1015	5	
109	RM	1000	1015	5	

Attach Calibration Sheet

Attach site map showing grid ID

INSTANTANEOUS LANDFILL SURFACE MONITORING

Rhup Maissid

Johnny Espinoza

WA 128-88-108

[illegible]Page 1 of 1

LOG OF REMEDIAL WORK FOR INSTANTANEOUS SURFACE MONITORING

Site Name: Bradley Monitoring Period: 10-10-05 Personnel: Cory Markley

[illegible]

1. Monitoring Date
2. TOC Reading in PPM

Signature: _____

INSTANTANEOUS LANDFILL SURFACE MONITORING

Craig Markley

Date: 10.10.05 Instrument Used: Active Areas

Temperature: _____

Attach Calibration Sheet
Attach site map showing grid ID

ENVIRONMENTAL INC.

Landfill: Bradley Landfill

OPERATOR INITIALS	DATE	BATTERY CHECK	FLOW METER READING	ZONE READING			CH4 CALIBRATION GAS UNCORRECTED READINGS						CH4 CALIBRATION GAS CORRECTED READINGS						3PT. CALIBRATION CHECK		
				10	100	1000	LOW		MED		HIGH		LOW		MED		HIGH		PPM	PPM	PPM
				PPM	PPM	PPM	PPM	ACT	PPM	ACT	PPM	ACT	PPM	ACT	PPM	ACT	PPM	ACT			
CM	10/10/05	OK	1.5																		
BR			2.0									500	500					500	500		500
JE			1.5									500	500					500	500		500
EG			1.5									500	500					500	500		500
RM			1.5									500	500					500	500		500
												500	500					500	500		500

BRADLEY LANDFILL

INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel:

Craig Madhley
Bill Ross

Bic Darr
Jesus Sanchez

Ed Gutierrez
Jason Minstetter

Johnny Espinoza

Joey Tasing

Date: 11-16-05 Instrument Used: OVA 128-88-108

Temperature: _____

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	REMARKS
1	CM	0715	0730	5	
2	BR	0715	0730	100,000	Line of Flags
3	JE	0715	0730	5	
4	BD	0715	0730	5,000	On Slope Area of Flags
5	JS	0715	0730	10,000	Well 87
6	JT	0715	0730	10,000	Well 86 and on slope above well
7	EG	0715	0730	5	
32	JM	0715	0730	5	
33	CM	0730	0745	3,000	Well 90
41	BR	0730	0745	5	
42	JE	0730	0745	5	
56	BD	0730	0745	5	
34	JS	0730	0745	5	
35	JT	0730	0745	5	
36	EG	0730	0745	5	
38	JM	0730	0745	5	
44	CM	0745	0800	5	
46	BR	0745	0800	5	
48	JE	0745	0800	5	
51	BD	0745	0800	5	
54	JS	0745	0800	5	
58	JT	0745	0800	5	
65	EG	0745	0800	5	
43	JM	0745	0800	5	
50	CM	0800	0815	5	
53	BR	0800	0815	5	
57	JE	0800	0815	5	
64	BD	0800	0815	5	
69	JS	0800	0815	5	
70	JT	0800	0815	5	

Attach Calibration Sheet

Attach site map showing grid ID

BRADLEY LANDFILL

INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel:

Craig Madley
Bill Ross

Dic Danh

Jesus Serrano

Ed Gutierrez

Jason Minister

Johnny Espinoza

Joey Tainy

Date: 11-16-05

Instrument Used: OVA 128-88-104

Temperature: _____

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	REMARKS
67	EG	0800	0815	5	
71	JM	0800	0815	5	
79	CM	0815	0830	5	
82	DR	0815	0830	5	
75	JE	0815	0830	10000	old Road line of flags
76	DD	0815	0830	10000	Well 13
77	JS	0815	0830	5	
86	JT	0815	0830	5	
88	EG	0815	0830	5,000	Well 74
94	JM	0815	0830	5	
97	CM	0830	0845	5	
101	BR	0830	0845	5	
104	JE	0830	0845	5	
113	BD	0830	0845	5	
108	JS	0830	0845	5	
107	JT	0830	0845	10000	Well 17 and on slope
93	EG	0830	0845	10,000	Well 205
78	JM	0830	0845	5	
111	CM	0845	0900	5	
112	DR	0845	0900	5	
68	JE	0845	0900	5	
72	DD	0845	0900	5	
80	JS	0845	0900	5	
83	JT	0845	0900	5	
87	EG	0845	0900	5	
89	JM	0845	0900	5,000	Well 63
95	CM	0900	0915	5	
98	DR	0900	0915	5	
102	JE	0900	0915	5	
105	BD	0900	0915	5	

Attach Calibration Sheet

Attach site map showing grid ID

BRADLEY LANDFILL

INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel:

Craig Markley
Bill Ross

Dic Dank
Jesus Sanchez

Ed Gutierrez
Jason Minstear

Johnny Espinoza

Joey Taing

Date: 11-16-05 Instrument Used: OVA 128-88-108

Temperature: 68°

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	REMARKS
109	JS	0900	0915	5	
114	JT	0900	0915	5	
118	EG	0900	0915	5,000	Well 36
123	JM	0900	0915	5	
124	CM	0915	0930	5,000	Well 23
126	BR	0915	0930	5	
127	JE	0915	0930	10,000	Well P25
131	DD	0915	0930	5	
132	JS	0915	0930	5	
121	JT	0915	0930	5	
122	EG	0915	0930	5	
125	JM	0915	0930	5	
20	CM	0930	0945	1000	Well 20
21	BR	0930	0945	5	
22	JE	0930	0945	5	
23	BD	0930	0945	5	
37	JS	0930	0945	5	
39	JT	0930	0945	5	
45	EG	0930	0945	5	
47	JM	0930	0945	5	
49	CM	0945	1000	5	
52	BR	0945	1000	5	
55	JE	0945	1000	5	
60	BD	0945	1000	5	
59	JS	0945	1000	5	
66	JT	0945	1000	5	
73	EG	0945	1000	5	
81	JM	0945	1000	5	
84	CM	1000	1015	5,000	Well 53
85	BR	1000	1015	5	

Attach Calibration Sheet

Attach site map showing grid ID

INSTANTANEOUS LANDFILL SURFACE MONITORING

Craig Markley
Dill Ross

Bic Deah

Ed Guterson

Dill Ross

Jesús Sánchez

Jason Minskey

Johnny Espinoza

Jay Tain

Date: 11-16-05 Instrument Used: DVA 128-88-108

[illegible]Page 4 of 4

INSTANTANEOUS LANDFILL SURFACE MONITORING

INSTA
Craig Mackley

Date: 11-16-05 Instrument Used: Active Areas

Temperature: _____

Active Area

Green waste

Page 1 of 1

ENVIRONMENTAL INC.

Landfill: Bradley

[illegible]

BRADLEY LANDFILL

INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel:

Craig Markley

Ed Gutierrez

Rick Clonshaw

Bill Ross

Bie Danh

Jesus Sanchez

Johnny Espinosa

Jason Minister

Joey Tang

Date: 12-20-05 Instrument Used:

OVA 128-88-108

Temperature: 45°

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	REMARKS
1	CM	0700	0715	5	
2	BR	0700	0715	500	Wet 45' also on slope
3	JE	0700	0715	5	
4	EG	0700	0715	500	Wet 45'
5	BD	0700	0715	5	
6	JM	0700	0715	5	
7	RC	0700	0715	5	
8	JS	0700	0715	5	
9	JT	0700	0715	5	
10	CM	0715	0730	5	
11	BR	0715	0730	5	
12	JE	0715	0730	5	
13	EG	0715	0730	5	
14	BD	0715	0730	5	
15	JM	0715	0730	5	
16	RC	0715	0730	5	
17	JS	0715	0730	5	
18	JT	0715	0730	5	
19	CM	0730	0745	5	
20	BR	0730	0745	5	
21	JE	0730	0745	5	
22	EG	0730	0745	5	
23	BD	0730	0745	5	
24	JM	0730	0745	5	
25	RC	0730	0745	5	
26	JS	0730	0745	5	
27	JT	0730	0745	5	
28	CM	0745	0800	5	
29	BR	0745	0800	5	
30	JE	0745	0800	5	

Attach Calibration Sheet

Attach site map showing grid ID

BRADLEY LANDFILL

INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel: Craig Markley Ed Gutierrez Rick Cronshaw
Bill Ross Bic Danks Jesus Sanchez
Johnny Espinosa Jason Minster Joey Tang

Date: 12-20-05 Instrument Used: OVA DS-88-108

Temperature: _____

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	REMARKS
32	EG	0745	0800	5	
33	BD	0745	0800	5	
41	JM	0745	0800	5	
42	RC	0745	0800	5	
56	JS	0745	0800	5	
69	JT	0745	0800	5	
70	CM	0800	0815	5	
75	BR	0800	0815	5	
76	JE	0800	0815	5	
77	EG	0800	0815	5	
34	BD	0800	0815	5	
43	JM	0800	0815	5	
35	RC	0800	0815	5	
36	JS	0800	0815	5	
38	JT	0800	0815	5	
44	CM	0815	0830	5	
46	BR	0815	0830	5	
48	JE	0815	0830	5	
51	EG	0815	0830	5	
50	BD	0815	0830	5	
53	JM	0815	0830	5	
57	RC	0815	0830	5	
64	JS	0815	0830	5	
67	JT	0815	0830	5	
71	CM	0830	0845	5	
79	BD	0830	0845	5	
82	JE	0830	0845	5	
86	EG	0830	0845	5	
88	BD	0830	0845	5	
94	JM	0830	0845	5	

Attach Calibration Sheet

Attach site map showing grid ID

BRADLEY LANDFILL

INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel:

Craig Martley
Bill Ross

Ed Cordero

Be. Dant

Robt Crenshaw

Jess Sanchez

Johnny Espinoza

Jasen Minster

Jay Taring

Date: 12-20-05

Instrument Used:

NA 128-88-108

Temperature: _____

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	REMARKS
78	RC	0830	0845	5	
93	JS	0830	0845	5	
107	JT	0830	0845	1000	Well # 17D/S 19D/S
108	CM	0845	0900	5	
111	BR	0845	0900	2000	line of flags near to Road.
112	JE	0845	0900	5	
97	EG	0845	0900	5	
101	BD	0845	0900	5	
104	JM	0845	0900	5	
113	RC	0845	0900	5	
54	JS	0845	0900	5	
58	JT	0845	0900	5	
65	CM	0900	0915	5	
68	BR	0900	0915	5	
72	JE	0900	0915	5	
80	EG	0900	0915	5	
83	BD	0900	0915	5	
87	JM	0900	0915	5	
89	RC	0900	0915	1000	Well # FW 63
95	JS	0900	0915	5	
98	JT	0900	0915	5	
102	CM	0915	0930	5	
105	BR	0915	0930	2000	Well # 208
109	JE	0915	0930	5	
114	EG	0915	0930	5	
116	BD	0915	0930	5	
118	JM	0915	0930	5	
123	RC	0915	0930	5	
124	JS	0915	0930	5	
125	JT	0915	0930	5	

Attach Calibration Sheet

Attach site map showing grid ID

BRADLEY LANDFILL

INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel:

Craig Martell

Ed Gutierrez

Rick Crenshaw

Don Ross

Die Damb

Jesus Sanchez

Johnny Espinoza

Jason Minster

Joey Tasing

Date: 12-20-05

Instrument Used:

NA DB-88-108

Temperature: _____

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	REMARKS
126	CM	0930	0945	5	
127	DR	0930	0945	5	
121	JE	0930	0945	5	
122	EG	0930	0945	5	
131	BD	0930	0945	5	
132	JM	0930	0945	5	
128	RC	0930	0945	5	
37	JS	0930	0945	5	
39	JT	0930	0945	5	
45	CM	0945	1000	5	
47	DR	0945	1000	5	
49	JE	0945	1000	5	
52	EG	0945	1000	5	
55	DD	0945	1000	5	
60	JM	0945	1000	5	
59	RC	0945	1000	5	
40	JS	0945	1000	5	
61	JT	0945	1000	5	
66	CM	1000	1015	5	
73	DR	1000	1015	5	
81	JE	1000	1015	5	
84	EG	1000	1015	5	
85	BD	1000	1015	5	
31	JM	1000	1015	5	
62	RC	1000	1015	5	
63	JS	1000	1015	5	
74	JT	1000	1015	5	
91	CM	1015	1030	5	
92	DR	1015	1030	5	
100	JE	1015	1030	5	

Attach Calibration Sheet

Attach site map showing grid ID

INSTANTANEOUS LANDFILL SURFACE MONITORING

Craig Markley
Bill Ross

Ed Gutierrez

Rich Crenshaw

Bic Danh

Jesus Sanchez

Johnny Espinoza

Taxon Minister

Jocelyne

Date: 12-20-05 Instrument Used: OVA 128-88-108

Temperature: _____

Attach Calibration Sheet
Attach site map showing grid ID

INSTANTANEOUS LANDFILL SURFACE MONITORING

INSTA
Craig Markley

Date: 12-20-05 Instrument Used: Active Areas

Temperature: _____

Active Areas, Trash, Scrapers. Dirt Trucks.

Page 1 of 1

ENVIRONMENTAL INC.

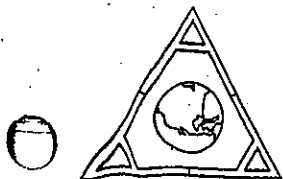
Landfill: Bridley Landfill

OPERATOR INITIALS	DATE	BATTERY CHECK	FLOW METER READING	ZONE READING			CH4 CALIBRATION GAS UNCORRECTED READINGS						CH4 CALIBRATION GAS CORRECTED READINGS						3PT. CALIBRATION CHECK		
				10	100	1000	LOW		MED		HIGH		LOW		MED		HIGH		PPM	PPM	PPM
				PPM	PPM	PPM	PPM	ACT	PPM	ACT	PPM	ACT	PPM	ACT	PPM	ACT	PPM	ACT			
CM	9/20/05	OK	1.5																		
BR			2.0									500	500				500	500		500	
JE			2.0									500	500				500	500		500	
EG			1.5									500	500				500	500		500	
BD			1.5									500	500				500	500		500	
JM			1.5									500	500				500	500		500	
RC			2.0									500	500				500	500		500	
JS			1.5									500	500				500	500		500	
JT	↓	↓	1.5									500	500				500	500		500	
												500	500				500	500		500	

APPENDIX E

LANDFILL GAS SAMPLING

- Laboratory Analysis
- Chain-of-Custody



AtmAA Inc.

23917 Craftsman Rd., Calabasas, CA 91302 • (818) 223-3277 • FAX (818) 223-8250

LABORATORY ANALYSIS REPORT

environmental consultants
laboratory services

SCAQMD Rule 1150.1 Components Analysis in Landfill Gas Tedlar Bag Samples

Report Date: December 5, 2005

Client: Shaw Environmental

Project Location: Bradley Landfill

Date Received: November 23, 2005

Date Analyzed: November 23, 2005

AtmAA Lab No.: Sample I.D.:	03275-7 Gas Comp. BL-002	03275-8 Flare #1 BL-003	03275-9 Flare #2 BL-004	03275-10 Flare #3 BL-005
Components		(Concentration in %,v)		
Nitrogen	16.2	15.6	45.2	36.8
Oxygen	1.16	1.02	4.52	5.16
Methane	43.1	43.9	24.8	29.0
Carbon dioxide	36.7	37.1	24.4	26.4
		(Concentration in ppmv)		
TGNMO	17700	7720	2900	6330
Hydrogen sulfide	54.8	47.7	27.6	16.1
		(Concentration in ppbv)		
Benzene	4360	6200	1260	8880
Benzylchloride	<40	<40	<40	<40
Chlorobenzene	382	209	212	263
Dichlorobenzenes*	4140	816	746	569
1,1-dichloroethane	230	208	67.2	113
1,2-dichloroethane	97.7	74.0	25.4	40.5
1,1-dichloroethylene	82.8	72.6	<40	44.6
Dichloromethane	732	752	<30	218
1,2-dibromoethane	<30	<30	<30	<30
Perchloroethylene	2740	1780	811	916
Carbon tetrachloride	<30	<30	<30	<30
Toluene	57400	39400	6000	21500
1,1,1-trichloroethane	<20	<20	<20	<20
Trichloroethene	754	602	186	323
Chloroform	<20	<20	<20	<20
Vinyl chloride	264	301	603	263
m+p-xylenes	40600	16300	7090	10000
o-xylene	13800	5150	2720	3230
		(Unit / ft.3)		
BTU	450	450	253	298

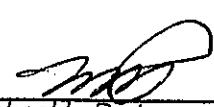
The reported oxygen concentration includes any argon present in the sample. Calibration is based on a standard atmosphere containing 20.95% oxygen and 0.93% argon.

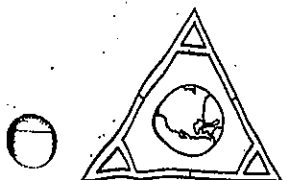
The accuracy of the TCD/GC Method for permanent gases is +/- 2%, actual results are reported.

TGNMO is total gaseous non-methane organics measured and reported as ppm methane.

* total amount containing meta, para, and ortho isomers

BTU is calculated from the analysis of methane and TGNMO.


Michael L. Porter
Laboratory Director



AtmAA Inc.

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LABORATORY ANALYSIS REPORT

**environmental consultants
laboratory services**

**Hydrogen Sulfide and Reduced Sulfur Compounds Analysis
in Landfill Gas Tedlar Bag Samples**

Report Date: December 5, 2005

Client: Shaw Environmental

Project Location: Bradley Landfill

Date Received: November 23, 2005

Date Analyzed: November 23, 2005

ANALYSIS DESCRIPTION

Hydrogen sulfide was analyzed by gas chromatography with a Hall electrolytic conductivity detector operated in the oxidative sulfur mode. All other sulfur components were measured by GC/ Mass Spec.

AtmAA Lab No.:	03275-7	03275-8	03275-9	03275-10
Sample I.D.:	Gas Comp.	Flare #1	Flare #2	Flare #3
	BL-002	BL-003	BL-004	BL-005
Components	(Concentration in ppmv)			
Hydrogen sulfide	54.8	47.7	27.6	16.1
Carbonyl sulfide	0.30	0.41	0.23	0.32
Methyl mercaptan	4.86	4.75	0.75	3.48
Ethyl mercaptan	<0.1	<0.1	0.16	<0.1
Dimethyl sulfide	7.03	6.63	0.70	6.43
Carbon disulfide	0.092	0.10	0.28	0.10
isopropyl mercaptan	0.32	0.33	<0.06	0.15
n-propyl mercaptan	<0.06	<0.06	<0.06	<0.06
Dimethyl disulfide	0.44	0.42	0.39	0.54
TRS	68.4	47.7	27.6	16.1

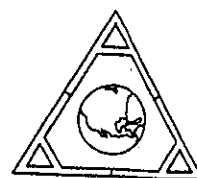
TRS - total reduced sulfur

Michael L. Porter
Laboratory Director

QUALITY ASSURANCE SUMMARY
(Repeat Analyses)

Project Location: Bradley Landfill
Date Received: November 23, 2005
Date Analyzed: November 23, 2005

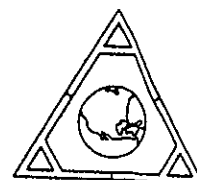
Components	Sample ID	Repeat Analysis		Mean Conc.	% Diff. From Mean
		Run #1	Run #2		
		(Concentration in %,v)			
Nitrogen	Gas Comp.	16.2	16.3	16.2	0.31
Oxygen	Gas Comp.	1.12	1.20	1.16	3.4
Methane	Gas Comp.	43.7	42.5	43.1	1.4
Carbon dioxide	Gas Comp.	37.0	36.4	36.7	0.82
(Concentration in ppmv)					
TGNMO	Flare #1	7600	7850	7720	1.6
(Concentration in ppbv)					
Benzene	Gas Comp.	4350	4370	4360	0.23
Benzylchloride	Gas Comp.	<40	<40	---	---
Chlorobenzene	Gas Comp.	375	389	382	1.8
Dichlorobenzenes	Gas Comp.	3840	4430	4140	7.1
1,1-dichloroethane	Gas Comp.	226	234	230	1.7
1,2-dichloroethane	Gas Comp.	97.2	98.2	97.7	0.51
1,1-dichloroethylene	Gas Comp.	82.5	83.1	82.8	0.36
Dichloromethane	Gas Comp.	730	734	732	0.27
1,2-dibromoethane	Gas Comp.	<30	<30	---	---
Perchloroethylene	Gas Comp.	2680	2790	2740	2.0
Carbon tetrachloride	Gas Comp.	<30	<30	---	---
Toluene	Gas Comp.	56200	58700	57400	2.2
1,1,1-trichloroethane	Gas Comp.	<20	<20	---	---
Trichloroethene	Gas Comp.	743	764	754	1.4



QUALITY ASSURANCE SUMMARY
(Repeat Analyses)
(continued)

Components	Sample ID	Repeat Analysis		Mean Conc.	% Diff. From Mean
		Run #1	Run #2		
(Concentration in ppbv)					
Chloroform	Gas Comp.	<20	<20	---	---
Vinyl chloride	Gas Comp.	266	262	264	0.76
m+p-xylenes	Gas Comp.	39000	42200	40600	3.9
o-xylene	Gas Comp.	13200	14400	13800	4.3
(Concentration in ppmv)					
Hydrogen sulfide	Gas Comp.	54.9	54.8	54.8	0.091
	Flare #1	46.6	48.7	47.6	2.2
	Flare #2	27.9	27.2	27.6	1.3
	Flare #3	15.9	16.3	16.1	1.2
Carbonyl sulfide	Gas Comp.	0.26	0.34	0.30	13
Methyl mercaptan	Gas Comp.	4.44	5.27	4.86	8.5
Ethyl mercaptan	Gas Comp.	<0.1	<0.1	---	---
Dimethyl sulfide	Gas Comp.	6.73	7.33	7.03	4.3
Carbon disulfide	Gas Comp.	0.088	0.095	0.092	3.8
iso-propyl mercaptan	Gas Comp.	0.29	0.34	0.32	7.9
n-propyl mercaptan	Gas Comp.	<0.06	<0.06	---	---
Dimethyl disulfide	Gas Comp.	0.46	0.43	0.44	3.4

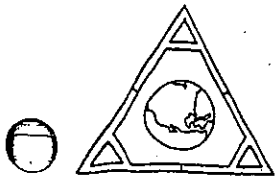
Four Tedlar bag samples, laboratory numbers 03275-(7-10), were analyzed for SCAQMD 1150.1 components, permanent gases, TGNMO, hydrogen sulfide, and reduced sulfur compounds. Agreement between repeat analyses is a measure of precision and is shown above in the column "% Difference from Mean". Repeat analyses are an important part of AtmAA's quality assurance program. The average % Difference from Mean for 28 repeat measurements from the four Tedlar bag samples is 2.8%.



APPENDIX F

AMBIENT AIR SAMPLING

- Laboratory Analysis
- Chain of Custody
- Wind Speed and Direction Records



AtmAA Inc.

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LABORATORY ANALYSIS REPORT

environmental consultants
laboratory services


SCAQMD Rule 1150.1 Components Analysis in Ambient Air Tedlar Bag Samples

Report Date: November 15, 2005
Client: Waste Management
Project Location: Bradley Landfill
Date Received: November 9, 2005
Date Analyzed: November 9-11, 2005

AtmAA Lab No.: Sample I.D.:	03135-6 Ambient Air AA-1	03135-7 Ambient Air AA-2	03135-8 Ambient Air AA-3	03135-9 Ambient Air AA-4
Components	(Concentration in ppmv)			
Methane	3.92	2.42	6.27	2.22
TGNMO	2.56	2.30	2.06	2.19
(Concentration in ppbv)				
Hydrogen sulfide	<50	<50	<50	<50
Benzene	0.99	0.98	0.99	0.80
Benzylchloride	<0.4	<0.4	<0.4	<0.4
Chlorobenzene	<0.2	<0.2	<0.2	<0.2
Dichlorobenzenes*	<1.1	<1.1	<1.1	<1.1
1,1-dichloroethane	<0.2	<0.2	<0.2	<0.2
1,2-dichloroethane	<0.2	<0.2	<0.2	<0.2
1,1-dichloroethylene	<0.2	<0.2	<0.2	<0.2
Dichloromethane	0.56	0.49	0.64	0.42
1,2-dibromoethane	<0.2	<0.2	<0.2	<0.2
Perchloroethylene	0.10	<0.1	0.11	0.10
Carbon tetrachloride	0.10	0.10	0.10	0.10
Toluene	3.04	2.79	2.58	2.33
1,1,1-trichloroethane	<0.1	<0.1	<0.1	<0.1
Trichloroethene	<0.1	<0.1	<0.1	<0.1
Chloroform	<0.1	<0.1	<0.1	<0.1
Vinyl chloride	<0.2	<0.2	<0.2	<0.2
m+p-xylenes	1.20	1.23	1.10	1.00
o-xylene	0.49	0.46	0.42	0.35

TGNMO is total gaseous non-methane organics measured and reported as ppm methane.

* total amount containing meta, para, and ortho isomers

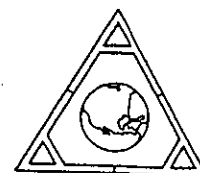

Michael L. Porter
Laboratory Director

QUALITY ASSURANCE SUMMARY
(Repeat Analyses)

Project Location: Bradley Landfill
Date Received: November 9, 2005
Date Analyzed: November 9-11, 2005

Components	Sample ID	Repeat Analysis		Mean Conc.	% Diff. From Mean
		Run #1	Run #2		
		(Concentration in ppmv)			
Methane	AA-1	4.07	3.78	3.92	3.7
TGNMO	AA-1	2.59	2.52	2.56	1.4
(Concentration in ppbv)					
Hydrogen sulfide	AA-1	<50	<50	---	---
Benzene	AA-1	0.99	0.99	0.99	0.0
Benzylchloride	AA-1	<0.4	<0.4	---	---
Chlorobenzene	AA-1	<0.2	<0.2	---	---
Dichlorobenzenes	AA-1	<1.1	<1.1	---	---
1,1-dichloroethane	AA-1	<0.2	<0.2	---	---
1,2-dichloroethane	AA-1	<0.2	<0.2	---	---
1,1-dichloroethylene	AA-1	<0.2	<0.2	---	---
Dichloromethane	AA-1	0.57	0.55	0.56	1.8
1,2-dibromoethane	AA-1	<0.2	<0.2	---	---
Perchloroethylene	AA-1	0.10	0.10	0.10	0.0
Carbon tetrachloride	AA-1	0.10	0.11	0.10	4.8
Toluene	AA-1	3.04	3.03	3.04	0.16
1,1,1-trichloroethane	AA-1	<0.1	<0.1	---	---
Trichloroethene	AA-1	<0.1	<0.1	---	---
Chloroform	AA-1	<0.1	<0.1	---	---
Vinyl chloride	AA-1	<0.2	<0.2	---	---
m+p-xylenes	AA-1	1.19	1.20	1.20	0.42
o-xylene	AA-1	0.50	0.48	0.49	2.0

Four Tedlar bag samples, laboratory numbers 03135-(6-9), were analyzed for SCAQMD Rule 1150.1 components, methane, and total gaseous non-methane organics (TGNMO). Agreement between repeat analyses is a measure of precision and is shown above in the column "% Difference from Mean". Repeat analyses are an important part of AtmAA's quality assurance program. The average % Difference from Mean for 9 repeat measurements from four Tedlar bag samples is 1.6%.



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RIES



Environmental Inc.

865 Via Lata • Colton, California 92324
(909) 422-1001 Fax (909) 422-0707

BRADLEY LANDFILL

Data: Wind Speed (MPH)

Station: BRADLEY

Period: NOV, 2005

Clock Time

Date	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MAX	HR.	AVE.	
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.00
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.00	
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.00	
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.00	
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.00	
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.00	
7											3	4	5	6	7	6	5	3	4	5	4	2	2	4		7	14	4.29
8	6	4	4	4	4	2	2	2	2	2																6	0	3.20
AV	6	4	4	4	4	2	2	2	2	2	3	4	5	6	7	6	5	3	4	5	4	2	2	4				3.74
SD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				

Data: Wind Direction (16 points)
Station: BRADLEY
Period: NOV, 2005

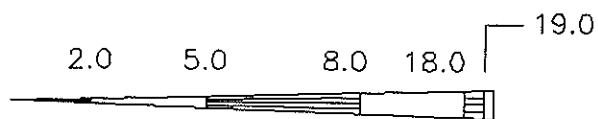
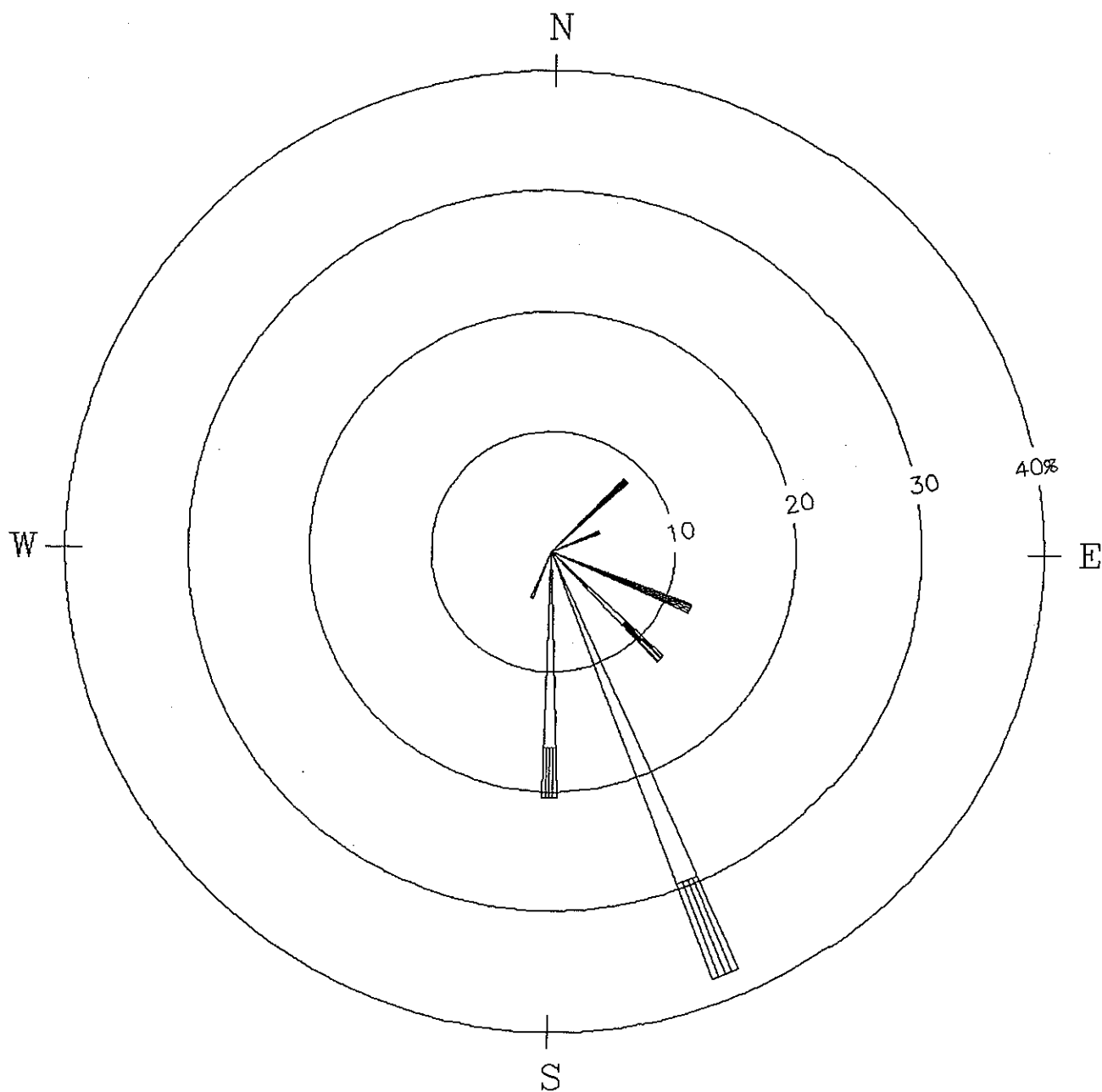
[illegible]

BRADLEY LANDFILL

Data: Wind Rose
 Station: BRADLEY
 Period: NOV 07, - NOV 08,
 Hours: 10 - 09

Wind Speed and Direction
 Frequency Distribution

Direction	Wind Speed (MPH) Group					TOT	%TOT	AVE SPEED
	0-2	3-5	6-8	9-18	19+			
16	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
1	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
2	8.3	0.0	0.0	0.0	0.0	2.0	8.33	2.00
3	4.1	0.0	0.0	0.0	0.0	1.0	4.17	2.00
4	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
5	12.0	0.0	0.0	0.0	0.0	3.0	12.50	2.00
6	4.1	4.1	4.1	0.0	0.0	3.0	12.50	4.00
7	0.0	29.0	8.3	0.0	0.0	9.0	37.50	4.78
8	0.0	16.0	4.1	0.0	0.0	5.0	20.83	4.00
9	0.0	4.1	0.0	0.0	0.0	1.0	4.17	5.00
10	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
11	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
12	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
13	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
14	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
15	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
MSG	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
TOT	29.0	54.0	16.0	0.0	0.0	24.0	100.00	1.49



WIND SPEED CLASS BOUNDARIES
(MILES/HOUR)

NOTES:
 DIAGRAM OF THE FREQUENCY OF
 OCCURRENCE FOR EACH WIND DIRECTION.
 WIND DIRECTION IS THE DIRECTION
 FROM WHICH THE WIND IS BLOWING.
 EXAMPLE - WIND IS BLOWING FROM THE
 NORTH .0 PERCENT OF THE TIME.

WINDROSE

BRADLEY LANDFILL
 PERIOD: 11/7-8/05

APPENDIX G

TEDLAR BAG QUALITY ASSURANCE AND CONTROL

- Tedlar Bag Checklist

BAG SAMPLER QUALITY CONTROL

PROJECT/SITE: BRADLEY BAG # _____
DATE PREPARED: 11-4-05 PREPARED BY: CMS
SAMPLER # 1 RUN DATE: 11-6-05

BAG INSTALLATION

BAG INSTALLED BY: CMS DATE: 11-6-05
FLOW READING: 85cc ADJUSTED ? () NO () OPEN VALVE ☒
TIME STARTED:
LOCAL 0900
LOCATION: AA-1

BAG REMOVAL

BAG REMOVED BY: CMS DATE: 11-7-05
CLOSE VALVE ☒ FLOW AT END: 85cc
BAG STATUS: FULL ☒ 1/2 FULL () EMPTY ()
TIME ENDED:
LOCAL 2100
SAMPLER STATUS: WORKING ☒ NOT WORKING ()
(specify in comments)
BATTERY STATUS GOOD ☒ BAD ()
COMMENTS: _____

REVIEWED BY: CMS

BAG SAMPLER QUALITY CONTROL

PROJECT/SITE: BRADLEY BAG # _____
DATE PREPARED: 11-4-05 PREPARED BY: CMS
SAMPLER # 2 RUN DATE: 11-6-05

BAG INSTALLATION

BAG INSTALLED BY: CMS DATE: 11-6-05
FLOW READING: 85cc ADJUSTED ? () NO () OPEN VALVE ☒
TIME STARTED:
LOCAL 0900
LOCATION: AA-2

BAG REMOVAL

BAG REMOVED BY: CMS DATE: 11-7-05
CLOSE VALVE ☒ FLOW AT END: 85cc
BAG STATUS: FULL ☒ 1/2 FULL () EMPTY ()
TIME ENDED:
LOCAL 2100
SAMPLER STATUS: WORKING ☒ NOT WORKING ()
(specify in comments)
BATTERY STATUS GOOD ☒ BAD ()
COMMENTS: _____

REVIEWED BY: CMS

BAG SAMPLER QUALITY CONTROL

PROJECT/SITE: BRADLEY BAG # _____
DATE PREPARED: 11-4-05 PREPARED BY: CMS
SAMPLER # 1 RUN DATE: 11-6-05

BAG INSTALLATION

BAG INSTALLED BY: CMS DATE: 11-6-05
FLOW READING: 85cc ADJUSTED ? () NO () OPEN VALVE ☒
TIME STARTED:
LOCAL 2100
LOCATION: AA-3

BAG REMOVAL

BAG REMOVED BY: CMS DATE: 11-8-05
CLOSE VALVE ☒ FLOW AT END: 85cc
BAG STATUS: FULL ☒ 1/2 FULL () EMPTY ()
TIME ENDED:
LOCAL 0900
SAMPLER STATUS: WORKING ☒ NOT WORKING ()
(specify in comments)
BATTERY STATUS GOOD ☒ BAD ()

COMMENTS: _____

REVIEWED BY: CMS

BAG SAMPLER QUALITY CONTROL

PROJECT/SITE: BRADLEY BAG # _____
DATE PREPARED: 11-4-05 PREPARED BY: CMS
SAMPLER # 2 RUN DATE: 11-6-05

BAG INSTALLATION

BAG INSTALLED BY: CMS DATE: 11-6-05
FLOW READING: 85cc ADJUSTED ? () NO () OPEN VALVE ☒
TIME STARTED:
LOCAL 2100
LOCATION: AA-4

BAG REMOVAL

BAG REMOVED BY: CMS DATE: 11-8-05
CLOSE VALVE ☒ FLOW AT END: 85cc
BAG STATUS: FULL ☒ 1/2 FULL () EMPTY ()
TIME ENDED:
LOCAL 0900
SAMPLER STATUS: WORKING ☒ NOT WORKING ()
(specify in comments)
BATTERY STATUS GOOD ☒ BAD ()

COMMENTS: _____

REVIEWED BY: CMS